Journal of Clinical and Nursing Research

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Complimentary Copy

ISSN (ONLINE): 2208-3693
ISSN (PRINT): 2208-3685

Journal of Clinical and Nursing Research

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ISSN (ONLINE): 2208-3693
ISSN (PRINT): 2208-3685

Submission open for 2021

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Research Article

Expression and Clinical Significance of Hypoxia-related Factors HIF-1a, Gli-1 and MMP9 in Breast Cancer

Chen Hong[1#], Donghong Xu[2#], Haizhi Qiao[1], Jinmei Li[1], Jinku Zhang[1*]

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[#]Hong Chen and Donghong Xu both are the first authors and contributed equally to this work

Abstract: ***Objective:***To investigate the expression and clinical significance of hypoxia inducible factors HIF-1α, Gli-1 and MMP9 in breast cancer. ***Methods:*** Eighty patients with invasive ductal carcinoma of the breast and 40 normal tissues adjacent to cancer were selected. Immunohistochemical methods were used to detect the expression of HIF-1α, Gli-1 and MMP9 in breast cancer and normal tissues adjacent to cancer, and their relationship with clinicopathological features of breast cancer and prognosis was explored. ***Results:*** The positive rates of HIF-1α, Gli-1 and MMP9 in breast cancer tissues were significantly higher than those in normal breast tissues. HIF-1α, Gli-1 and MMP9 expressions are positively correlated in breast cancer. ***Conclusion:*** HIF-1α, Gli-1 and MMP9 proteins are involved in the pathogenesis of breast cancer.

Keywords: Breast cancer; Hypoxia-inducible factors; MMP9; Tumor treatment

Publication date: January, 2021

Publication online: 31 January, 2021

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1 Introduction

The most important feature of tumors is the growth of tumor cells that are difficult to regulate. The increasing number of cells leads to increase in cellular oxygen consumption, which can easily lead to the formation of a hypoxic microenvironment within the tumor, making tumor cells more aggressive. This study explored the effects of HIF-1α, Gli-1 and MMP9 on the invasion and metastasis of breast cancer cells under hypoxia in order to find out the best parameters for evaluating breast angiogenesis and provide some insights for the diagnosis and treatment of breast. The results are reported as follow.

2 Materials and Methods

2.1 Study Subjects

From 2010 to 2019, 80 patients with invasive ductal carcinoma of the breast were first diagnosed in our hospital; 40 patients with adjacent normal tissues were followed up for more than 5 years. Complete clinical and pathological data. The histological classification and clinical stage of each case are in line with the breast cancer diagnosis and treatment standards established by the Ministry of Health in 1988.

2.2 Methods

Breast cancer MDA-MB231 cells were cultured under hypoxia, and normal oxygen culture was used as a control. The invasion ability of MDA-MB cells in each group was tested by Transwell invasion assay; the expression levels of HIF-1α, Gli-1 and MMP9 protein were detected by Western blot. Breast cancer cells were stably transfected with shRNA, and the effect of hypoxia on the invasion ability of breast cancer cells was detected by the Transwell invasion assay again. The expression levels of HIF-1α, Gli-1 and MMP9 proteins were detected by Western blot to study the effect of hypoxic environment on the invasion and metastasis of breast cancer.

2.3 Results Assessment

Under the microscope, MMP9, Gli-1 and HIF-1α were observed as brown particles. The positive parts of the three were observed with a 100x microscope and a 200x microscope. The staining level was evaluated based on the staining intensity and the percentage of positive cells. Colorless or light yellow is 0, brownish-yellow or brown is positive, and transparent brown particles in the cell membrane are positive: 1 point for staining only stronger than negative, 2 points for clear staining, 3 points for strong staining; 2 points for 10%-50% of the total number of cells being positive, 3 points for 51%-80% positive, and 4 points for >80% positive. The two scores were added together, and the staining intensity is (-) as long as the number of positive cells is less than 10%; 3 points is considered as weak positive (+); 4 to 5 points as medium positive (++) and 6 to 7 points as strong positive (+++)[1].

2.4 Statistical Processing

SPSS software system was used to carry out the correlation analysis of x2 test. Spearman correlation analysis was used.

3 Results

Expression of HIF-1α, Gli-1 and MMP9 Proteins in Breast Tissue. The positive expression rates of HIF-lα protein in normal breast tissue, dysplastic breast tissue and breast cancer tissue were 0%, 28% and 60.53%, respectively, and the differences between the groups were statistically significant ($P<0.05$). The positive expression rates of Gli-1 protein in normal breast tissue, dysplastic breast tissue, and breast cancer tissue were 0%, 27.4%, and 52.29%, respectively, and the difference between the groups was statistically significant ($P<0.05$). The positive expression rate of MMP9 protein in normal breast tissue and dysplastic breast tissue and breast cancer tissue were 0%, 26.51% and 55.83%, respectively, and the difference was not statistically significant (all $P>0.0167$).

Table 1. The relationship between expression of HIF-lα and Gli-1 proteins and the clinicopathological features of breast cancer

Clinicopathological Features	*N*	HIF-la		*P*	Gli-1		*P*
		(+~+++)	(-)		(+~+++)	(-)	
Tumor Size				>0.05			>0.05
≤2cm	43	27	16		16	27	
>2cm	37	25	12		22	15	
Clinical Stage				<0.05			<0.05
Stage Ⅰ, Ⅱ	49	31	18		20	29	
Stage Ⅲ	31	19	12		23	8	
Tissue Grading				<0.05			<0.05
Gl + G2	48	29	19		20	29	
G3	32	21	11		18	13	
Lymph Node Metastasis				<0.05			<0.05
Positive	59	48	11		40	19	
Negative	21	16	5		7	14	
Androgen Receptor				<0.05			>0.05
Positive	57	45	12		26	21	
Negative	23	17	6		12	11	
Progesterone receptor				>0.05			>0.05
Positive	49	31	18		26	23	
Negative	31	20	11		14	17	

MMP9 immunohistochemical staining showed that the positive expression of MMP-9 protein was mainly located in the cytoplasm, and the positive expression was pale yellow to brownish-yellow particles. Under the microscope, brown microgranular cells are benign cells, and interstitial cells do not contain positive cells[2]. At high magnification, five fields were randomly selected, the staining concentration area was selected to determine the number of cells and the result, and the ratio of positive cells to the total number of cancer cells is calculated. The number of positive cells < 10% is considered negative, 10-25% is +, 25-50% is ++, >50% is +++, where +++ is strong positive expression. In this study, ++ and +++ were regarded as positive expression, and the rest were considered negative expression.

4 Discussion

HIF-lα is the main transcriptional regulator, which mediates the adaptive response of cells to the hypoxic microenvironment composed of subunits and β subunits, one of which is considered to be a specific oxygen regulatory subunit and the activity of HIF-lα. HIF plays a key role in the adaptive response of tumor cells to hypoxia and resistance to radiation damage. HIF1 is a heterodimer composed of HIF-1α and hIf-1b subunits, while HIF-1α is more sensitive to hypoxia and indirectly reflects tissue hypoxia by detecting the expression of HIF-1α. Local hypoxia and hypoglycemia microenvironment formation are common phenomena during rapid tumor growth. In this hypoxic state, HIF-1α induces the expression of enzymes involved in glycolysis, increases glycolysis, and to a certain extent can improve the imbalance of energy supply and energy consumption caused by tumor hypoxia[3].

HIF-1α is not expressed in most normal human tissues, but high expression of HIF-1α can be detected in many tumor tissues. The expression of HIF-1α is driven by the continuous growth and volume increase of tumor cells, which induces the expression of various genes and proteins related to the malignant transformation of tumor cells, and promotes the angiogenesis of tumor tissues. The results showed that the positive expression of HIF-1α protein in normal breast tissue and hyperplastic breast tissue increased, and the abnormal expression of HIF-1α may be an early factor in breast cancer, indicating that HIF-1α gene expression is upregulated in breast cancer[4].

The glucose transporter Gli-1 is the most widely distributed transporter among known glucose transporters. In the hypoxic response mediated by hili-1α, Gli-1 expression is up-regulated. In this study, the expression of Gli-1 in normal breast cancer, proliferative breast cancer and breast cancer was significantly different, indicating that Gli-1 can be used as a marker for early breast disease. In breast cancer, the expression of Gli-1 is related to lymph node metastasis and tumor differentiation. The expression rate of tumors with lymph node metastasis is higher than that of non-metastatic tumors, and the expression rate of moderately differentiated cancer tissues is higher than that of well differentiated tissues. At the same time, the slower the tumor stage, the faster the positive expression rate[5]. It is suggested that the high expression of Gli-1 protein may be a characteristic event of breast cancer, and can be used as an indicator of the malignancy and prognosis of breast cancer.

Studies have shown that the expression of HIF-1α and Gli-1 is positively correlated. HIF-1α plays an important role in the regulation of breast cancer and the expression of glycometabolism-related proteins in tumor tissues. HIF-1α transcription activation induces Gli-1 expression. Under normoxic conditions, some tumor genes and growth factors can induce the expression of HIF-1α and Gli-1, suggesting that the synergistic effect of HIF-1α and Gli-1 may play an important role in the occurrence of breast cancer.

MMP9 and tumor blood vessels: MMP9 can participate in various physiological and pathological processes of the human body. The positive expression of MMP9 in small cell tissues was significantly higher than that of normal tissues and benign disease tissues, and the difference was statistically significant, but there was no significant difference between normal tissues and benign tissues. It has also been found that the expression of MMP9 is related to the clinical stage, pathological grade and lymph node metastasis of non-small cell carcinoma[6]. The most basic step of tumor neovascularization is the degradation and destruction of extracellular matrix and vascular basement membrane by cancer cells.

In summary, HIF-1α, Gli-1 and MMP9 can be used as indicators to evaluate the malignant degree of breast cancer, and the combined detection of these three indicators can more accurately reflect the biological characteristics of breast cancer. With the in-depth study of HCa and Ghu, treatments targeting them may become an important means of tumor treatment and prevention.

Acknowledgement

Key Laboratory of Molecular Pathology and Early Diagnosis of Tumor in Hebei Province

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Journal of Clinical and Nursing Research

Research Article

Epidemiological Analysis of Asymptomatic SARS-CoV-2 Novel Coronavirus Infection Cases in Yinchuan City of Ningxia

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Funding: Autonomous Region's Key Research and Development Program of Science and Technology to Support the "Prevention and Control of the Pneumonia Epidemic due to Novel Coronavirus Infection" Special Project "Novel Coronavirus Infection Induced Pneumonia" (No.2020BEG03057); (2019-nCoV) Research on the Clinical Characteristics and Prevention and Treatment of Patients with Atypical Symptoms; Autonomous Region's Key Research and Development Program to Support the Special Project of "Prevention and Control of Pneumonia Epidemic due to Novel Coronavirus Infection", "Research on Process Optimization of Pneumonia Screening, Quarantine and Quarantine Release of Novel Coronavirus Infection"(No. 2020BEG03058)

Abstract: ***Objective:*** To analyze the epidemiological characteristics of asymptomatic SARS-CoV-2 novel coronavirus infection cases in Yinchuan City, Ningxia. ***Methods:*** Cases of asymptomatic SARS-CoV-2 novel coronavirus infections discovered in Yinchuan City from February 2020 to April 2020 were taken as the research subjects, epidemiological and laboratory examination data were collected, and statistics and analysis were conducted. ***Results:*** Among the 10 cases of asymptomatic infection, 6 were males and 4 were females, with an average age of (34.3±2.1) years; 2 cases had a history of living in Hubei, 8 cases had a history of close contact with confirmed cases; 6 cases had no other underlying diseases while the other 4 cases were accompanied by one or more underlying diseases; 6 cases were diagnosed as asymptomatic infection by serum-specific IgM antibody detection; 4 cases were diagnosed as asymptomatic infection by throat swab testing; there were 4 cases with alanine base transferase level higher than the normal range, 2 cases with aspartate aminotransferase level higher than the normal range, and 3 cases with D-dimer level out of the normal range. ***Conclusion:*** The asymptomatic SARS-CoV-2 novel coronavirus infection has certain clinical characteristics; it is infectious and has insidious characteristics. Even if medical observation is dismissed, monitoring is still needed to prevent the pandemic from rebounding.

Keywords: Yinchuan City of Ningxia; COVID-19; Asymptomatic infection; Epidemiological characteristics

Publication date: January, 2021
Publication online: 31 January, 2021

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At the end of 2019, a kind of pneumonia pandemic caused by a new type of coronavirus disrupted people's pace of life to welcome the New Year. Pneumonia caused by the SARS-CoV-2 novel coronavirus is highly contagious and has a long latent period, making it difficult to be detected. It can spread through close droplets and physical contact. As it is a new type of virus, people still lack sufficient knowledge of it and treatment experience.

Therefore, with the large number of infections and the large number of infected people, people are extremely panicked and uneasy. Among them, asymptomatic infections, although without specific clinical symptoms, it cannot be ruled out that the viruses they carry are still highly contagious, and if they are not prevented and controlled in time, they can develop into patients or hidden sources of infection, jeopardizing the society. Therefore, to identify, isolate, treat and study asymptomatic novel coronavirus infections as soon as possible should be the focus of pandemic prevention and control. We are now collecting clinical cases to further understand the epidemiological characteristics of asymptomatic novel coronavirus infections, aiming to serve as a reference for epidemic prevention and control.

1 Data Sources and Methods

1.1 Basic Data

According to the National Health Commission "Diagnosis and Treatment Protocol for Novel Coronavirus Pneumonia (Trial Version 5)"[1], asymptomatic cases of SARS-CoV-2 novel coronavirus infection were selected as the research subjects. The research subjects had no clinical symptoms, such as cough, fever, fatigue and other subjective symptoms. They all had a history of close contact or were discovered during physical examinations, including the following: (1) After 14 days of quarantine and medical observation, there was no self-perceivable or clinically identifiable symptoms and signs; (2) During the latent period of "asymptomatic infection".

1.2 Collection of Asymptomatic Infection Cases

Search for cases of asymptomatic infection by tracking and investigating confirmed cases and close contacts (refers to all people who may have close contact with confirmed cases or suspected infected persons within a certain range of activities, including family members, relatives, friends, classmates, medical staff and service personnel, etc[2]). Diagnosis criteria: There were no relevant clinical manifestations, such as sore throat, cough, fever and other symptoms and signs that can be self-perceived or clinically recognized, but the respiratory tract and other specimens were tested positive with pathological SARS-CoV-2 novel coronavirus detection, or tested positive for serum specific antibody IgM (it is definitive if any one of the criteria was met).

1.3 Investigation Methods

Demographic data and epidemiological data, etc. of the cases were collected, and sampling and testing were conducted. (1) Pharyngeal swab: 2 Swabs with polypropylene fiber heads were used to collect pharyngeal swab specimens, the swabs were inserted and the sterile swab rod near the proximal part was broken off, and the tube cap was tightened and sealed with sealing film. (2) Antibody detection: colloidal gold method was used for detection, completed within 15 minutes. (3) Others: such as white blood cell count, lymphocyte count, alanine aminotransferase, aspartate aminotransferase, D-dimer, urea nitrogen, creatinine, procalcitonin, high-sensitivity C-reactive protein and creatine kinase.

1.4 Statistics

The epidemiological data of asymptomatic infections were analyzed by descriptive analysis method, and SPSS 25.0 statistical software was used for data processing and recording.

2 Results

2.1 General Data Results

A total of 10 cases of asymptomatic infection were collected. Among them, there were 6 males and 4 females. The youngest was 23 years old and the oldest was 67 years old, with an average age of (34.3±2.1) years.

Among the 10 cases of asymptomatic infection, 2 cases have a history of living in Hubei, and 8 cases have a history of close contact with confirmed cases.

The time of onset. In 6 out of the 10 cases of asymptomatic infection, the time of residence or time of contact with confirmed cases can be clearly determined. The time from contact to hospital admission was 3 to 43 days, with an average of (23.1±2.3) days.

Underlying diseases. 6 cases did not have other underlying diseases, and the other 4 cases had one or more underlying diseases, including 2 cases of hypertension, 1 case of anemia, and 1 case of fatty liver.

6 cases were diagnosed as asymptomatic infection from positive serum-specific IgM antibody test; 4 cases were diagnosed as asymptomatic infection from

positive throat swab test.

2.2 Clinical Manifestations

None of the 10 asymptomatic infections showed obvious symptoms such as cough and fever, and their body temperature did not exceed 37.3 ℃ .

2.3 Laboratory Indicators

Among the 10 cases of asymptomatic infection, 1 case (10.0%) had white blood cell count lower than the normal value, with a count value of (4.8±0.6) × 10^9/L; 1 case had lymphocyte count higher than the normal range (10.0%) ; D-dimer was out of the normal range in 3 cases (30.0%), where the average data value was (0.9±0.3) μg/L; the high-sensitivity C-reactive protein level was out of the normal range in 1 case (10.0%), the data value was (2.3±0.6) mg/L; 2 cases (20.0%) with creatine kinase level exceeding the normal range; 4 cases (40.0%) with alanine base transferase level higher than the normal range, the data value was (27.1±1.5) U/L; 2 cases (20.0%) with aspartate aminotransferase level higher than the normal range, the data value was (21.3±1.4) U/L. In addition, the creatinine levels of all 10 cases of asymptomatic infection were within the normal range, with an average of (66.3±5.2) μmol/L.

2.4 Pharyngeal Swab Test Results

9 cases of asymptomatic infections tested positive in the novel coronavirus nucleic acid test on the first pharyngeal swab specimens collected; 1 case was tested positive for a single target in the novel coronavirus nucleic acid test, and pharyngeal swab specimens were collected after 2 days, and was positive in the novel coronavirus nucleic acid test; the time taken for the 10 cases of asymptomatic infection in this group to turn negative from positive in the pharyngeal swab novel coronavirus nucleic acid test was 4-16 days, with an average of (8.3±1.2) days. As of April, the above 10 cases of asymptomatic infections have been tested negative in the novel coronavirus nucleic acid test with retested pharyngeal swab specimens.

2.5 Antibody Test Results

The 6 asymptomatic infections diagnosed by the detection of serum-specific IgM antibodies were re-examined one week later, of which 2 were still tested positive and 4 turned negative. Among the 4 cases of negative serum-specific IgM antibodies, 2 cases were tested positive for serum-specific IgG antibodies and the other 2 were tested negative. In these 6 cases, all were tested negative in the second nucleic acid test during the reexamination, and were discharged from quarantine subsequently.

3 Discussions

COVID-19 is characterized by different latent periods, strong infectivity, and the lack of specific clinical symptoms. In addition to the initial onset of the disease, there is a lack of clinical diagnosis and treatment experience. Therefore, once infected, some of the disease progresses quickly, and it is easy to develop breathing difficulties, hypoxemia, septic shock, difficulty correcting metabolic acidosis and coagulopathy, etc.[3], and the mortality rate is high. Since the outbreak of the pandemic, it has received global attention. It is worth noting that as the main source of transmission, asymptomatic infections have insidious characteristics, which brings great difficulties to epidemiological investigations and tracing of earliest infections and close contacts. Therefore, this type of group is also the key populations that cause the large-scale propagation of the virus[4].

The 10 cases of asymptomatic infection in this study were analyzed for their epidemiological characteristics: white blood cell counts were mostly normal, with only 1 abnormal case; lymphocyte counts were mostly low, with only 1 case higher than the normal range; the level of high-sensitivity C-reactive protein was mostly normal, with only 1 case out of the normal range, and the creatinine level in all cases was within the normal range. For the creatine kinase indicator value, 2 cases were out of the normal range, for the D-dimer indicator, 3 cases were out of the normal range, and for alanine transferase level, 4 cases were out of the normal range . According to the above statistics, among the laboratory indicators of asymptomatic infections, D-dimer, creatine kinase, and alanine transferase may be affected to some extent. Analysis of the causes of liver damage may be the following points: (1) After being infected with the novel coronavirus, it will stimulate the activation of human immune cells, which in turn leads to excessive accumulation of immune cells and the release of large amounts of inflammatory cytokines, causing a cytokine storm;

(2) Studies have suggested that the novel coronavirus receptor angiotensin-converting enzyme 2 is lowly expressed in hepatocytes, but is highly expressed in bile duct cells. Therefore, when bile duct cells are damaged, it will cause liver damage[5]; (3) For the drug treatment of patients with COVID-19, pharmacological liver injury is also an influencing factor of abnormal liver function[6]; (4) Affected by underlying diseases. Therefore, the above indicators can be used as the basis for judging the severity of COVID-19, and as reference indicators for clinical diagnosis, treatment and prognosis.

In this study, 2 cases had a history of living in Hubei, and 8 cases had a history of close contact with confirmed cases. The time from contact to hospital admission was 3~43 days, with an average of 23.1±2.3 days. As there was no self-perceivable or clinically identifiable symptoms and signs, asymptomatic infections are easily overlooked, which makes their infectiousness more insidious. In this group of 10 cases of asymptomatic infection, the pharyngeal swab novel coronavirus nucleic acid test turned from positive to negative in 4-16 days, with an average of 8.3±1.2 days. Although the negative-turning time may not be accurate enough, it can still be used as a reference for asymptomatic infection data.

Based on the above analyses, the asymptomatic SARS-CoV-2 novel coronavirus infection has certain clinical characteristics, which are infectious and insidious. Even if medical observation is dismissed, monitoring is still required to prevent the pandemic from rebounding.

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Journal of Clinical and Nursing Research

Research Article

Brief Introduction to the Contribution of "Zhouhou Beijifang" to the Emergency Treatment in Traditional Chinese Medicine

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Abstract: As the first emergency treatment handbook in China, "Zhouhou Beijifang" recorded a large number of treatment methods used in attending to emergencies, and is known for its simplicity, convenience, low-cost and experience. This paper discusses the important value of moxibustion, nasal drug therapy, sublingual administration, emergency surgery and excretion-based drugs in the treatment of emergencies in the book, and discusses its significance and contribution to modern medicine in the history of emergency treatment.

Keywords: Zhouhou Beijifang; Traditional Chinese Medicine; Emergency; Contribution

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

The "Zhouhou Beijifang" (hereinafter referred to as "Zhouhou") by Ge Hong of the Eastern Jin Dynasty is the earliest existing traditional Chinese medicine (TCM) clinical emergency handbook. The title of the book means an emergency handbook that can be always kept behind the elbow (i.e. to carry along). It is a practical first-aid handbook that one can keep at hand. The book has a total of 2635 prescriptions, including 123 on apparatuses and techniques, 99 acupuncture prescriptions, 21 comprehensive prescriptions, and 2392 medical prescriptions[1]. They are all designed for emergencies, and the apparatuses and medicinal materials used in the book are all readily available. First-aid methods are also simple and easy to learn, and can be carried out by non-medical personnel, so the book is known for its simplicity, convenience, low-cost, and experience.

2 Moxibustion

"Zhouhou Beijifang" comprises of eight volumes and 73 articles, where only 69 articles have content in them (article 37 has a title but no text, and the 44th, 45th, and 46th articles have no title and no text)[2]. Among them, 70 articles recorded 101 entries regarding acupuncture and moxibustion, including 6 entries on needle techniques, 1 entry on combined use of acupuncture and moxibustion, 2 entries on acupoint massage, and the rest are moxibustion prescriptions[3]. Compared to acupuncture, moxibustion is easier for non-doctors to operate, simple and easy to access, suitable for ordinary people to perform first-aid with it, so the first-aid methods in this book is mostly moxibustion treatment. Ge Hong advocated that "for moxibustion the sites of administration are only given in units of inches without naming any acupoints, so that ordinary people can use the instructions upon reading, and one need not go beyond the fence to get equipped, that those who believe in it may be free from disasters!". "Without naming any acupoints" makes it easy for ordinary people to locate and select acupoints. Coupled with simple and easy-to-operate moxibustion, it is more convenient for timely treatment of emergencies. The moxibustion methods in the book can be applied to many emergencies, including more than 20 kinds of situations such as sudden cardiac arrest, coma, sudden

heart and abdominal pain, apoplexy, and stroke, etc., involving many diseases such as those of the internal, external, and andrology, etc.[4] Nine articles listed moxibustion as the first choice for treating emergencies due to its simplicity and effectiveness. Zhou Jianwei[5] concluded that the reason behind the remarkable curative effects of moxibustion in treating emergencies is that it can "invigorate qi for relieving desertion, reviving yang for resuscitation ", "regulate qi and activate blood, eliminate blood stasis", "dispel wind and remove toxins, lead evils out of the body" and "outthrust and eliminate evils, dissipate heat and open up blockages". The moxibustion prescriptions recorded in "Zhouhou" have great guiding significance and reference value for our current research on moxibustion treatment of emergencies.

3 Nasal Drug Therapy

Nasal medication mainly refers to the way of administering Chinese herbal medicine through the nasal cavity to stimulate the nasal mucosa to absorb the medicine, thereby transporting the qi in the body, dredging the viscera and meridians, and promoting the circulation of qi and blood, which is a simple and quick way to prevent and treat diseases with remarkably rapid efficacy[6]. There are few discourses on nasal medication in "Zhouhou". Mei Quanxi[7] et al. found only 27 medical prescriptions on nasal medication after sorting out “Zhouhou”, but it can also be seen that this method has significant effects on the emergency treatment in TCM. "Zhouhou" Volume 1, Article 5, Prescriptions for Treating Nightmares and Insomnia: Take the yellow soil at the end of the stove and blow it into the nose through tube. Take realgar and osmanthus, and blow them into the nose, they work well in combination." The materials used in this article are easy to obtain, convenient to operate, and effective. The principle of Ge Hong's treatment is similar to the atomization inhalation method in modern medicine. Some scholars have found that[7] the medicines used by Ge Hong for treating emergencies are mostly pungent and warming, and are generally rich in volatile oils, so that these medicines can reach the site of disease quickly and serve the purpose of treating emergencies, so they have good effects on strokes and comas.

4 Sublingual Administration

In this book, Ge Hong also made another great pioneering work, that is, he proposed sublingual administration to treat heart diseases for the first time. Hu Ying[8] sorted out “Zhouhou” and found that Ge Hong specialized in using pungent and warming medicines, with cinnamon twig and calamus being the most representative. These medicines are rich in volatile oils, which are quickly absorbed through sublingual administration, have high bioavailability, and can exert rapid effects in treating emergencies. Therefore, they have significant effects in treating emergencies such as comas and paralysis, and can fully bring out the unique effects of sublingual medicine. The first volume of the book recorded "Article 2, Prescriptions for Treating Sudden Cardiac Arrest and Coma: smash the calamus, and put under the tongue together with a large jujube seed. Modern studies have proved[9] that the absorption time of sublingual drugs is only 30 seconds to 1 minute, which is nearly 20 times faster than oral drugs. Therefore, this method has its own unique advantages for first-aid. Only in modern times did the Western world discover that sublingual nitroglycerin can effectively relieve angina pectoris, whereas Ge Hong had discovered this method more than 1600 years ago in China. This method has extraordinary instructional significance and clinical value for TCM emergency treatment, which is the cornerstone of current TCM clinical experiment and practice.

5 Emergency Operations

In this emergency treatment prescription handbook, in addition to the use of traditional medicine and acupuncture, Ge Hong also creatively invented many first-aid methods such as the earliest mouth-to-mouth resuscitation, simple orthopedic fixation, catheterization, enema, surgical hemostasis and disinfection, abdominal puncture and gastric lavage etc. The book recorded that "...if one’s body is already stiff, gradually massage to soften the body, and keep pressing on the abdomen. In a short time, breath will come out from the mouth, and breathing will resume and the eyes will open, keep carrying out the procedure and do not stop." According to this record of resuscitation, it is found that this

method is consistent with the principle of current cardiopulmonary resuscitation (CPR). It is also recorded that when someone accidentally ate wild kudzu, “(the rescuer should) open the victim’s mouth with objects, take three chicken eggs and stir to mix evenly, then shove it down the victim’s throat, and the victim will spit out the wild kudzu in a short time", through the use of the vomiting method to empty the poison from the victim’s stomach and reduce the toxins in the body. It was also written that "for difficulty urinating, smash the squash root, and hydrolyze with a bit of water, then blow into the lower part through tube", "for constipation, blow into the anus from the upper end, for difficulty urinating and excreting, blow it in front and behind to unclog". Although performing catheterization with bamboo stick is crude and involves the risk of infection, it was already a relatively good TCM surgical emergency treatment given the medical level and conditions at that time. Putting aside its shortcomings in terms of the lack of sterility and strict disinfection, it has played a vital role in the emergency treatment at that time.

6 Other Treatment Methods

Ge Hong had also used fecal drugs to treat emergencies. The book recorded a large number of human and animal excrements used as medicine to treat diseases[10], such as human urine, male rat feces, chicken feces, horse feces, dog feces, Niudong (thin cow dung) and other animal feces were used to treat diseases. Through sorting out the book[11], it was found that fecal drugs have the effects of clearing heat, relieving pain, detoxification, and eliminating filth. As Ge Hong wrote in "Zhouhou • Article 61: Prescription for Treating Bee Sting": "If bee stings people, wash the wounds with human urine ". Human urine is more convenient and easy to obtain for medical treatment. It is available everywhere and it can take effect quickly for emergency treatment. In modern medicine, these drugs have rarely been used for the treatment of diseases, but there are a small number of them still in use. For example, in modern research, it is said that adding urine of children to hemostatic drugs has a significant effect on the treatment of epistaxis and acute bleeding[12]. With the development of the times and progress in the medical standards, fecal medicines have been gradually phased out, but it has a special contribution to TCM for having promoted the development of TCM at that time. Although it is less useful now, its therapeutic mechanisms should still be discussed to further promote the development of TCM.

7 Conclusion

As the first treatise on TCM emergency treatment in China, "Zhouhou" recorded a large number of inspiring and instructional treatment methods for later generations. At the time when oral Chinese medicine was still the main treatment method, boiled decoctions were very unsuitable for treating emergencies due to their slow effects. Combined with the living conditions of the common people at that time, it was difficult to afford the expenses of visiting a regular medical clinic, hence the publication of Ge Hong's "Zhouhou" was a life-saving book for the ordinary people. It is portable and easy to understand, most of the apparatuses and medicinal materials needed in the book are easy to obtain, and the operation procedures are simple, and the effects are rapid, creating a precedent for the systematic treatment of emergencies. We should study the treatment methods in the book comprehensively and systematically, extract the contents that can still be used for reference or inspire ideas for modern emergency treatment, and further enhance the status and importance of TCM emergency treatment in modern medicine.

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Journal of Clinical and Nursing Research

Research Article

Correlation between the Expression of Inflammatory Factors and the Degree of Intervertebral Disc Degeneration

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Funding: This work was supported by the Project of the Department of Science and Technology in Shaanxi Province (2020JM-702) and the Project of Scientific Research in Shaanxi University of Traditional Chinese Medicine(2020FS06).

Abstract: ***Objective:*** To investigate the relationship between the expression of IL-6, IL-8, IL-15, IFN-a, TNF-a and TRPC6 in the disc tissue of patients with cervical disc degeneration. ***Methods:*** The expression levels of inflammatory factors IL-6, IL-8, IL-15, IFN-α, TNF-α and TRPC6 were analyzed by RT-PCR, and the correlation between inflammatory factors and Pfirrmann grade and inflammatory factors was analyzed. ***Results:*** The mRNA expression levels of IL-6, IL-8, IL-15, TNF - α and TRPC6 were significantly higher in Pfirrmann grade IV-V than in Pfirrmann grade II-III ($P<0.05$), and IFN-α expression level in IV-V intervertebral disc samples was significantly lower than that in II-III discs ($P<0.05$); The mRNA expression levels of IL-6, IL-8, IL-15, TNF - α and TRPC6 were positively correlated with pfirmann grading ($P<0.05$), IFN - α was negatively correlated with pfirmann grading ($P<0.05$), IL-6, IL-8, IL-15, TNF - α and TRPC6 were positively correlated with each other ($P<0.05$), IFN - α was negatively correlated with IL-6, IL-8, IL-15, TNF-α and TRPC6 ($P<0.05$). ***Conclusion:*** IL-6, IL-8, IL-15, IFN-α, TNF- α and TRPC6 are closely related to the degree of cervical disc degeneration.

Key words: Cervical intervertebral disc; Degeneration; Inflammatory factors; Severity; Relevance

Publication date: January, 2021
Publication online: 31 January, 2021

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Degenerative disc is easy to lead to degenerative disc herniation, such as lumbar disc herniation, lumbar stenosis and low back pain[1]. These diseases are usually accompanied by acute or chronic refractory low back pain and root pain[2]. Intervertebral disc degeneration is closely related to biological structure and mechanics, blood circulation, molecular and biochemical factors[3-4]. At present, the understanding of the pathophysiological basis of root pain has evolved from the hypothesis of simple mechanical nerve root compression to more complex mechanisms involving mechanical and biochemical mechanisms. It has been reported that cytokines play an important role in the process of intervertebral disc degeneration. The expression levels of interleukin-6 (IL-6), tumor necrosis factor-α(TNF-α) and nerve growth factor (NGF) are related to degenerative disc herniation. Previous studies have confirmed the association between lumbar disc disease and clinical symptoms of cytokine expression, but the relationship between the expression level of inflammatory cytokines in patients with intervertebral disc degeneration and clinical pain mechanism is still controversial.The report is as follows.

1 Material and methods

1.1 General information

A total of 62 patients with cervical disc degeneration who underwent surgical treatment in our hospital from January 2015 to January 2018 were selected. The inclusion criteria were as follows: (1) they met the diagnostic criteria of cervical disc degeneration and had surgical indications; (2) The operation and treatment of cervical disc were performed; (3) The age ranged from 20 to 80 years; (4) Informed consent was obtained from patients. Exclusion criteria: (1) patients with immune system diseases such as ankylosing spondylitis or rheumatoid arthritis; (2) Patients with malignant tumor; (3) Patients with tuberculosis of spine; (4) Patients with systemic infectious diseases. This study was reviewed and approved by the hospital ethics committee. There were 28 males and 34 females with an average age of (51.3 ± 8.7) years and a mean body mass index (BMI) of (22.7 ± 2.4) kg/m2;A total of 86 samples of intervertebral disc tissue were obtained, including C3-422 cases, C4-536 cases, C5-615 cases, C6-713 cases.

1.2 Detection index and method

All patients underwent cervical MRI examination before operation. The severity of intervertebral discs was graded according to Pfirrmann's criteria. According to the structure of intervertebral disc, the boundary between nucleus pulposus and annulus fibrosus, MRI signal and intervertebral disc height, they were divided into grade I to grade V.

RT-PCR: The RNA Extraction Kit (bio service, R1051) was purchased from Beijing Jinshi Baiyou Technology Co., Ltd. after grinding the disc tissue in liquid nitrogen, 1mltr izol was added to every 200 mg tissue and homogenate with a homogenizer. The specific RNA extraction steps were carried out in strict accordance with the instructions. The RNA was then purified by RNeasy minikit (74104, Qiagen) according to the instructions, and then nanodrop (Thermo Fisher) was used for quality control and quantification. The extracted RNA was reverse transcribed into cDNA and RT-PCR was performed. Using GAPDH Gene as internal reference, the expression of inflammatory factors in cervical intervertebral disc samples was calculated by 2 - Δ CT. 2 - Δ CT = ctgadph, the target gene of CT.

1.3 Observation indexes and statistical methods

The correlation between the expression levels of TNF - α, IL-6, NGF and the degree of intervertebral disc degeneration was evaluated by perason method. SPSS 19.0 software was used for statistical analysis. The measurement data in accordance with normal distribution were expressed by means ± standard deviation ($\bar{x} \pm s$) and two independent samples t test was used. The data above two groups were compared by analysis of variance; χ^2 was used for counting data, and the difference was statistically significant (P<0.05).

2 Results

2.1 Comparison of inflammatory factors among different Pfirrmann grades

In 86 cases of cervical intervertebral disc samples, 16 cases were classified as grade II, 28 cases as grade III, 31 cases as grade IV and 11 cases as grade v. the mRNA expression levels of IL-6, IL-8, IL-15, TNF - α and TRPC6 in Pfirrmann grade IV-V were significantly higher than those in grade II-III (P < 0.05), and the expression level of IFN - α in grade IV-V was significantly lower than that in grade II-III (P < 0.05).

2.2 Correlation analysis between inflammatory factors and Pfirrmann classification

The mRNA expression levels of inflammatory factors IL-6, IL-8, IL-15, TNF - α and TRPC6 were positively correlated with Pfirrmann grading (P < 0.05), while the expression of IFN - α was negatively correlated with Pfirrmann grading (P < 0.05).

2.3 Correlation analysis of different inflammatory factors

IL-6 was positively correlated with IL-8, IL-15, tnf- α and TRPC6 (P<0.05), IL-8 was positively correlated with IL-15, tnf- α and TRPC6 (P<0.05), IL-15 was positively correlated with TNF-α and TRPC6 (P<0.05), TNF-α and TRPC6 were positively correlated (P<0.05), IFN α was negatively correlated with IL-6, IL-8, IL-15, TNF- α and TRPC6 (P<0.05).

3 Discussion

The results showed that IL-8 was the highest mRNA expression gene in cervical intervertebral disc samples, and the mRNA expression levels of IL-6, IL-

8, IL-15, TNF - α and TRPC6 in PFIR rmann grade IV-V were significantly higher than those in grade II-III.Recent studies have found that proteoglycan content and tissue osmotic pressure decrease in the process of intervertebral disc degeneration. IL-8 is a chemokine, belonging to the CXC subfamily. Especially in the acute phase, IL-8 is secreted by a variety of cell types in response to inflammatory stimuli.It is known that IL-8 can induce hyperalgesia through the local production of sympathetic amines that sensitize nociceptors, thus leading to pain.In cervical intervertebral discs, oxidative / nitrite stress and injury caused by mechanical loading may be an important reason for the increase of IL-8 level. Therefore, the specific mechanism of cervical disc pain may be closely related to the expression level of IL-8.

In addition to IL-8, IL-6 is also an inflammatory cytokines with many biological effects. After tissue injury, it can not only promote monocyte differentiation into macrophages, but also activate a variety of intracellular signal transduction pathways by binding to non signal membrane bound IL-6 receptor and then interacting with membrane proteins. IL-6 is considered to be involved in the pathogenesis of spinal cord neuropathic pain, especially in the pain stimulation of symptomatic radiculopathy and peripheral nerve injury. Previous studies have shown that lumbar radicular pain caused by disc herniation is associated with the increase of IL-6. This study also proved that IL-6 is closely related to Pfirrmann classification of cervical disc, which indicates that IL-6 has an important effect on the degeneration of the disc.

TRPC6 is a new target in the study of pain and inflammation. The expression of TRPC6 contributes to mechanical hyperalgesia. In cartilage and intervertebral disc, TRPC6 can regulate cell phenotype stability and cell aging in vitro. The expression of TRPC6 is closely related to fibrosis. Our results also suggest that TRPC6 may be involved in the fibrosis related mechanism of cervical disc degeneration. Studies have shown that TNF-α is a joint factor involved in the initiation of the inflammatory cascade of intervertebral disc, and IL-15 can regulate the proliferation and activation of T and B cells in inflammatory immune response. IFN-α is an important regulator of the immune system. IFN-α is negatively correlated with the degree of cervical disc lesions, indicating that IFN-α is significantly inhibited in the process of pathological changes. Comprehensive analysis showed that IL-6 was positively correlated with IL-8, IL-15, TNF - α and TRPC6, while IFN - α and IL-6 were negatively correlated with IL-8, IL-15, TNF-α and TRPC6. The results showed that inflammation, pain receptor and immune regulation were involved in the process of intervertebral disc degeneration.

In conclusion, inflammatory cytokines are related to the pathogenesis of pain and the progression of degenerative disc in patients with degenerative disc herniation. With the increase of disease degree, the expression levels of TNF - α and IL-6 gradually increased, and the expression of NGF gradually decreased. At the same time, the expression level of TNF - α in patients with low back pain was significantly higher than that in patients with leg pain.

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Journal of Clinical and Nursing Research

Research Article

Exploring the Influences of Continuous Self-Management Education on the Self-Care Skills and Health Behavior of Patients with PICC Intubation

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Abstract: ***Objective:*** To analyze the effects of continuous self-management education on the self-care ability and health behavior of patients with tumor through peripherally inserted central venous catheters (PICC). ***Methods:*** The period from August 2018 to August 2020 was used as the research time range, and the random number table method was used as the basis for grouping. 80 patients with malignant tumors who regularly performed fixed catheter maintenance care in the PICC clinic of our hospital were admitted in the experimental group (given PICC specialist nursing, and implemented continuous self-management education), and 80 patients with PICC tube malignant tumors discharged from the superior hospital during this time range served as the control group (return to the original catheterization hospital from time to time or perform catheter maintenance care in the nursing clinic of our hospital). The self-care ability scores, health behavior scores, and complications during intubation between both groups were analyzed. ***Results:*** (1) There was no significant difference in self-care ability score and healthy behavior score between groups before the intervention, $P>0.05$; the self-care ability score and health behavior score of the research group were better than the control group after intervention, $P<0.05$; (2) After investigation, the incidence of complications in the research group (2.50%) was lower than that of the control group (10.00%), but there was no difference between the groups, $P>0.05$. ***Conclusion:*** Continuous self-management education has good effects on improving the self-care ability of tumor patients with PICC intubation. It can urge patients to maintain good health behaviors and reduce complications. It is worthy of promotion.

Keywords: Continuous self-management education; PICC catheterization; Tumor; Self-care ability; Health behavior

Publication date: January, 2021
Publication online: 31 January, 2021
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PICC catheter placement is a common clinical infusion support technology. Compared with traditional intravenous infusion technology, it has the advantage of longer catheter indwelling time. It is suitable for cancer patients on chemotherapy, hypertonic drugs, chronic diseases on long-term infusion, and long-term intravenous nutritional support. However, due to the need to take the tube home, if it is not properly maintained, patients are prone to complications such as infection and bleeding from the puncture site. Therefore, to ensure safe and long-term use of PICC catheters, it is necessary to strengthen patient self-management after catheter placement. Some scholars pointed out that the continuity of care model can extend the nursing service from hospitalization to discharge, which helps to improve the self-management ability of patients. Based on this, this article analyzes the impact of continuous self-management education on PICC intubed tumor patients on their self-care ability and health behavior.

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1 Information and Methods

1.1 General Information

Taking the period from August 2018 to August 2020 as the research time range and using the random number table method as the basis for grouping, 160 cases of PICC intubed tumor patients received in our hospital during this time range were selected and divided into the control group (included 80 cases) and the experimental group (80 cases included). Control group: 35 cases/45 cases of male/female, 40-76 years old, average age (58.5±11.3) years, education level: 14 cases of elementary school and below, 37 cases of junior high school, 25 cases of high school or technical secondary school, university and above 4 cases; experimental group: male/female: 43 cases/37 cases, age 39-75 years, average age (57.4±10.6) years, education level: 15 cases of elementary school and below, 49 cases of junior high school, 11 cases of high school or technical secondary school, 5 cases of university and above. Inclusion criteria: Able to take care of themselves, normal communication skills, and clear consciousness; Living in an urban area, convenient for telephone follow-up; PICC placement for the first time; Be aware of the research content and signed an informed consent form at the same time. Exclusion criteria: those who cannot cooperate with the follow-up; those with obvious mental disorders; those with peripheral nervous system disorders; those with catheterization time less than 1 month; those with a history of central nervous system disorders. There is no difference in basic data (educational level, gender, etc.) between groups, $P>0.05$, which can be compared for study.

1.2 Methods

Control group (provided with conventional care): that is, returning to the original catheterization hospital from time to time or performing catheter maintenance care in the nursing clinic of our hospital.

Experimental group (provided with continuous self-management education): (1) Forming an education team: a safety management team comprised of nurses, head nurses, nursing backbones, and PICC full-time nurses, etc., responsible for implementing continuous self-management education, including formulating management plans and results evaluation, analysis of problems, and follow-up, etc.; (2) In-hospital phase: formulate a clinical routing table for education, guide patients to join the medical WeChat group, and regularly push courses in a targeted manner so that patients can learn self-care skills; (3) Out-of-hospital phase: establish WeChat Group, regularly publish PICC picture information videos, example pictures, classic cases, maintenance materials, complications risk factors, and basic treatment methods, etc. If patients have any questions, they can apply for video conversations so that nursing staff can observe the situation on the spot and provide solutions; encourage patients to help each other and ask other patients for advice; post reminders, such as avoid pulling the catheter when changing clothes, and don't let sweat contaminate the interface in summer, etc.; open a green channel for patients to make appointments for PICC maintenance according to their own time; follow up regularly, telephone follow-up is conducted once a week in the first month of intubation, about 20 minutes each time, and home visits and telephone follow-ups are conducted twice a week after one month of intubation to understand the patient's health status, intubation situations, and self-care questions, etc., to provide answers in time.

1.3 Observation Indicators

The self-care ability score, health behavior score, and complications during intubation were taken as observation indicators. (1) Self-care ability score: The reference is the Exercise of Self-care Agency Scale (ESCA)[1], the scale is a 4-level scoring scale, 4 dimensions (self-conception, self-responsibility, health knowledge level, self-care skills), 43 items, when the score increases, it means that the self-care ability is enhanced; (2) Health behavior score: the reference is the health promoting lifestyle profile (HPLP)[2], the scale has 7 dimensions (mental health, interpersonal relationship, stress regulation, health responsibility, nutrition, physical activity, health education behavior). When the score increases, the behavior is healthier; (3) Complications during intubation: understand types of complications and number of occurrences during intubation.

1.4 Statistical Methods

Observation data were summarized and processed by SPSS23.0 statistical software. Meanwhile, the self-care ability score and health behavior score were expressed as ($\bar{x} \pm s$) and t-test was performed. The complications during intubation were expressed as n/% and checked with χ^2 test, $P<0.05$ indicates that

the comparison is significant.

2 Results

2.1 Self-Care Skills Score Analysis

There was no significant difference in ESCA scores between the groups before the intervention, $P>0.05$; the ESCA score of the experimental group was better than the control group after the intervention, $P<0.05$, see Table 1.

Table 1. Comparison of Self-Care Skills Score ($\bar{x} \pm s$)

Item (Score)	Control (n=80)		Experimental (n=80)	
	Before Intervention	After Intervention	Before Intervention	After Intervention
Self-Conception	15.13±6.42	15.66±6.64	15.15±6.04&	17.74±6.42#
Self-Care Responsibility	11.13±3.85	11.57±4.03	11.55±4.06&	15.25±4.22#
Health Knowledge Level	39.53±10.15	39.77±11.42	39.36±10.42&	47.06±11.64#
Self-Care Skills	22.04±4.05	22.86±4.85	22.26±5.53&	26.14±5.88#

Note: &$P>0.05$ (Comparison between groups before intervention); #$P<0.05$ (Comparison between groups after intervention)

2.2 Health Behavior Scores Analysis

There was no significant difference in HPLP scores between the groups before intervention, $P>0.05$; HPLP scores in the experimental group were better than those in the control group after intervention, $P<0.05$, see Table 2.

Table 1. Comparison of Self-Care Skills Score ($\bar{x} \pm s$)

Item (Score)	Control (n=80)		Experimental (n=80)	
	Before Intervention	After Intervention	Before Intervention	After Intervention
Mental Health	24.81±1.80	26.85±1.56	24.54±1.56&	36.70±1.29#
Interpersonal Relationship	11.06±1.53	13.75±0.64	11.02±1.64&	17.53±0.87#
Stress Regulation	12.58±1.60	14.00±1,07	12.66±1.75&	16.71±1.12#
Health Responsibility	12.45±1.02	14.87±1.72	12.02±1.53&	17.10±1.16#
Nutrition	10.47±2.06	13.03±1.58	10.86±0.72&	15.71±1.34#
Physical Activity	7.16±1.15	9.76±1.20	7.54±1.14&	13.02±1.01#
Health Education Behavior	93.52±19.12	100.30±18.43	93.45±18.37&	119.04±16.26#

Note: &$P>0.05$ (Comparison between groups before intervention); #$P<0.05$ (Comparison between groups after intervention)

2.3 Analysis of Complications during Intubation

After investigation, the incidence of complications in the experimental group (2.50%) during intubation was lower than that in the control group (10.00%), but there was no difference between the groups, $P>0.05$, see Table 3.

Table 3. Comparison of Complications during Intubation (n/%)

Group	Bleeding at the Puncture Site (No. of Cases)	Phlebitis (No. of Cases)	Catheter Blockage (No. of Cases)	Venous Thrombosis (No. of Cases)	Ectopic Catheter (No. of Cases)	Total Incidence (%)
Control (n=80)	3(3.75)	1(1.25)	2(2.50)	1(1.25)	1(1.25)	8(10.00)
Experimental (n=80)	1(1.25)	1(1.25)	0(0.00)	0(0.00)	0(0.00)	2(2.50)
χ^2						3.8400
P						0.0500

3 Discussion

PICC catheterization is convenient for fixation, simple operation, and long retention time, which can avoid vascular damage caused by multiple venous punctures[3]. However, as tumor patients with PICC catheterization need to take the tube home, reducing unintended extubation during this period and reducing complications of catheterization have become important research topics.

This study shows that continuous self-management education is more suitable for the application of tumor patients with PICC intubation. On the one hand, continuous self-management education can improve the self-care skills of patients with PICC intubation. Continuous self-management education can help patients acquire self-caring skills as soon as possible and enhance their self-care skills

through tracking and individualized guidance throughout the entire process of catheterization to reduce complications related to catheterization and avoid interruption of treatment or extubation due to complications such as venous thrombosis. Therefore, the ESCA score of the experimental group was better than the control group after intervention, $P<0.05$. On the other hand, continuous self-management education can help PICC tumor patients maintain healthy behaviors by strengthening their health beliefs through regular phone calls and family visit follow-ups, answering questions and resolving confusions on WeChat groups, opening green channels, encouraging mutual assistance among patients[4], enhancing self-care responsibility and promoting health behavior changes. Consequently, the HPLP scores of mental health, interpersonal relationship, and stress regulation in the experimental group were better than those of the control group after the intervention, $P<0.05$. Therefore, it is concluded that continuous self-management education has the advantages of convenience, low-cost, real-time and other application advantages, which is suitable for PICC intubed tumor patients.

In summary, since continuous self-management education can not only improve the self-care ability of PICC patients with tumors, but also urge them to develop healthy behaviors, which is worthy of clinical promotion.

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Journal of Clinical and Nursing Research

Research Article

Evaluation on the Effects of Pulmicort Respules, Ventolin combined with Methylprednisolone in the Adjuvant Treatment of Bronchiolitis in Children

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Abstract: ***Objective:*** To investigate the effects of Pulmicort Respules, Ventolin combined with methylprednisolone in the adjuvant treatment of bronchiolitis in children. ***Methods:*** A total of 100 children with bronchiolitis in our hospital from March 2018 to March 2020 were selected and divided into 2 groups with 50 cases in each group by using random number table. Both groups received conventional treatment. Based on this, the control group was given Pulmicort Respules and Ventolin, and the observation group was given methylprednisolone in combination with the conventional regimens on the basis of the control group treatment, the course of treatment was 5 days. The levels of inflammatory factors [tumor necrosis factor-α (TNF-α), interleukin 6 (IL-6)] and the time to symptom disappearance before and after treatment were compared and analyzed between the two groups. ***Results:*** After treatment, the levels of serum TNF-α and IL-6 in the two groups decreased, and the observation group was lower than the control group, the difference was statistically significant ($P<0.05$); the disappearance of pulmonary moist rales, lung wheezing, cough and wheezing in the observation group were all earlier than the control group, the difference was statistically significant ($P<0.05$). ***Conclusion:*** Pulmicort Respules, Ventolin combined with methylprednisolone is effective in adjuvant treatment of bronchiolitis in children, which can reduce inflammation and promote the recovery of children.

Keywords: Pediatric bronchiolitis; Pulmicort Respules; Ventolin; Methylprednisolone; Inflammatory factors; Time to symptoms disappearance

Publication date: January, 2021

Publication online: 31 January, 2021

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Bronchiolitis is a common acute lower respiratory tract infectious disease in children. It is mostly caused by viral or bacterial infections. The clinical manifestations are mainly asthma, cough, and wheezing[1]. The prognosis of the disease is good, but when the condition is serious, it can induce respiratory failure or heart failure, threatening the life of children. Pulmicort Respules is a potent glucocorticoid, which can inhibit the inflammation of the respiratory tract and relieve bronchospasm; Ventolin is a selective β2 adrenergic receptor agonist, which has good therapeutic effects on reversible airway obstruction diseases; methylprednisolone is a medium-acting glucocorticoid, which has strong anti-inflammatory and anti-allergic effects. In this study, Pulmicort Respules, Ventolin and methylprednisolone were used in combination in children with bronchiolitis to study their therapeutic effects. The report is as follows.

1.1 General Information

As approved by the Medical Ethics Committee of our hospital, 100 children with bronchiolitis who were treated in our hospital from March 2018 to March 2020 were selected and divided into 2 groups using a random number table. There were 50 cases in the control group, including 26 males and 24 females; the age range was 2 months to 1 year, with an average age of (0.71±0.24) years; the course of disease was 2-7 days, with an average of (3.98±1.17) days. There

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were 50 cases in the observation group, including 23 males and 27 females; the age range was 3 months to 1 year, with an average age of (0.69±0.21) years; the course of disease was 2-7 days, with an average of (4.03±1.35) days. Comparing the general information of the two groups, the difference was not significant (P>0.05), therefore comparable.

1.2 Inclusion criteria

(1) Inclusion criteria: Meet the relevant diagnostic criteria[2]; The children's family members voluntarily sign an informed consent form; All the patients were diagnosed by chest X-ray. (2) Exclusion criteria: Children with pneumonia, congenital heart disease, and tuberculosis infection; Children with heart failure and respiratory failure; Children allergic to the drugs in this study.

1.3 Methods

1.3.1 Conventional treatment

Both groups received conventional treatment: ① Oral compound sulfamethoxazole granules (Zhejiang Anbeite Pharmaceutical Co., Ltd., production batch numbers 20170901, 20190302, specifications: sulfamethoxazole 0.4g, trimethoprim 80mg), 1 bag/time for children under 40kg, 2 bags/time for children over 40kg, 2 times/d; ② Treat children with fever using ice pack, alcohol sponge bath and other therapies; ③ Oxygen therapy for children with severe wheezing and dyspnea.

1.3.2 The control group

Administer budesonide suspension for inhalation (trade name: Pulmicort, manufacturer: AstraZeneca Pty Ltd, production batch number: 20180202, 20190402, specification: 2ml: 0.5mg), salbutamol sulfate inhalation aerosol (Trade name: Ventolin, manufacturer: Shantou Medical Pharmaceutical Co., Ltd., production batch numbers: 20180103, 20190302, specification: 100ug/press), 1 mg Pulmicort Respules was added into 0.5ml of 5% Ventolin, diluted to 3ml by adding physiological saline, oxygen driven atomized inhalation, 1 time/8h, the oxygen flow was controlled at 6-8L/min, the inhalation time was 10min/time, and the treatment course was 5d.

1.3.3 The observation group

Methylprednisolone sodium succinate for injection (trade name: methylprednisolone, manufacturer: PFIZER SA, production batch number: 20180201, 20190202, specification: 40 mg) was added on the basis of the control group treatment scheme, intravenous drip, 2 mg /kg, 1 time/12h, treatment course 5d.

1.4 Evaluation indicators

(1) Inflammatory factors: compare the levels of serum tumor necrosis factor-α (TNF-α) and interleukin 6 (IL-6) before and 5 days after treatment between the two groups. Collect 3mL of venous blood in the morning after fasting and separate the serum. Then it was tested with ZS-680 automatic biochemical analyzer (Zhongsheng (Suzhou) Medical Instrument Co., Ltd.). (2) Time to symptoms disappearance: Compare the disappearance time of cough, wheezing, pulmonary moist rales and lung wheezing between the two groups.

1.5 Statistical methods

The SPSS 25.0 software was used for data processing. The measurement data was expressed as and checked with t-test, and the count data was expressed as percentage and checked with χ^2 test. P<0.05 was considered statistically significant.

2 Results

2.1 Inflammatory factors

Before treatment, there was no significant difference in serum TNF-α and IL-6 levels between the two groups (P>0.05); after treatment, the levels of TNF-α and IL-6 decreased in both groups, and the observation group was lower than the control group, the difference is statistically significant (P<0.05). See Table 1.

Table 1. Comparison of the levels of inflammatory factors between the two groups before and after treatment ($\bar{x} \pm s$)

Time	Group	TNF-α (pg/ml)	IL-6 (ng/ml)
Before Treatment	Control (n=50)	39.48±5.32	3.04±1.06
	Observation (n=50)	39.36±5.47	2.95±1.03
	T	0.111	0.431
	P	0.912	0.668
After Treatment	Control (n=50)	33.52±4.18[a]	2.41±0.77[a]
	Observation (n=50)	24.19±3.65[a]	1.24±0.49[a]
	T	11.889	9.065
	P	0.000	0.000

Note: Compared to before treatment, [a]P<0.05

2.2 The time to symptom disappearance

The disappearance time of cough, wheezing, pulmonary moist rales, and lung wheezing in the observation group was earlier than that in the control group, and the difference is statistically significant (P<0.05). See Table 2.

Table 2. Comparison of the time to clinical symptoms disappearance between the two groups ($\bar{x} \pm s$, d)

Group	Disappearance Time of Cough	Disappearance Time of Wheezing	Disappearance Time of Pulmonary Moist Rales	Disappearance Time of Lung Wheezing
Control (n=50)	7.21±1.28	3.43±0.64	7.01±2.30	5.67±1.63
Observation (n=50)	4.01±0.35	1.31±0.29	3.98±1.06	3.16±0.57
T	17.052	21.335	8.460	10.278
P	0.000	0.000	0.000	0.000

3 Discussion

The clinical symptoms of bronchiolitis are closer to those of pneumonia, but the main symptom is wheezing, which mostly occurs in children under one year old. Pulmicort Respules has strong anti-inflammatory effects and high glucocorticoid receptor binding ability, which can inhibit the activity of immune cells in the airway, reduce the secretion of inflammatory substances, and can repair the airway and reduce bronchial hyperresponsiveness[3]. Ventolin can directly act on the airway smooth muscle surface to increase the level of intracellular cyclic adenosine monophosphate and inhibit the production of endogenous substances, thereby effectively dilating the bronchus and enhancing the clearance of fiber bronchial capillaries[4]. However, it is worth noting that when Pulmicort Respules is used, it can easily cause adrenal cortex hypofunction, adrenal hyperfunction, and cause symptoms such as anorexia and allergies; Ventolin can easily induce hypokalemia, causing headaches and tachycardia in children, affecting the treatment effect.

This study showed that after treatment, the levels of serum TNF-α and IL-6 in the two groups decreased, and the observation group was lower in the levels than the control group; the observation group's symptoms of pulmonary moist rales, lung wheezing, cough, and wheezing all disappeared earlier than the control group, it showed that Pulmicort Respules, Ventolin combined with methylprednisolone can reduce the level of inflammatory factors in children with bronchiolitis and promote their recovery. Analyzing the reasons: TNF-α is mainly produced by macrophages and monocytes, which can act on endothelial cells, damage blood vessels and trigger inflammation; IL-6 can stimulate and activate T cells and B cells, promote their proliferation, and at the same time accelerate the synthesis of acute-phase proteins in liver cells and participate in inflammation[5]. Methylprednisolone is a medium-acting glucocorticoid, which can effectively reduce vascular congestion, inhibit the movement of inflammatory cells to the site of inflammation, and prevent a series of reactions with inflammatory mediators. At the same time, it can also regulate the function of phagocytes and stabilize the lysosomal membrane to exert anti-inflammatory effects. In addition, the drug can strengthen its anti-inflammatory activity through the methylation at the 6α-position on its ring molecule, increase lung permeability, and thereby increase the blood drug concentration in the lungs, improve the therapeutic effects, and promote the recovery of children. As methylprednisolone has a weak affinity for albumin and transporter protein, and it mainly exists in the free form in the plasma,

the plasma concentration can quickly reach the peak value, which is beneficial to shorten the onset time of the drug and quickly relieve the symptoms in children[6]. Combined with Pulmicort Respules and Ventolin, it can produce synergistic effects, effectively inhibit the secretion of inflammatory factors such as TNF-α, IL-6, and accelerate the treatment outcome in children.

In summary, Pulmicort Respules, Ventolin combined with methylprednisolone has distinct effects in the adjuvant treatment of bronchiolitis in children, which can control the inflammatory response and promote the recovery of children, therefore it is worthy of promotion.

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Journal of Clinical and Nursing Research

Research Article

Clinical Study of Acupotomy Trinity Lysis on Cervical Spondylotic Myelopathy with Liver and Kidney Deficiency Syndrome

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Funding: Scientific Research Project of Shandong Colleges of Traditional Chinese Medicine (2016FY06)

Abstract: ***Objective:*** To compare the therapeutic effects of acupotomy trinity lysis and traditional acupotomy on cervical spondylotic myelopathy. **Methods:** A total of 205 patients with cervical spondylotic myelopathy of liver and kidney deficiency syndrome were randomly divided into the experimental group (105 cases) and the control group (100 cases). The experimental group was relaxed with acupotomy in three positions: Heaven (tian), Human (ren) and Earth (di). Traditional acupotomy was used to relax Ashi acupoints of the affected vertebra in the control group. One treatment was conducted in one week, and the duration of one course of treatment was three weeks. The VAS, JOA score and NDI index were observed after treatment. ***Results:*** Before and after treatment, the total treatment efficiency of the treatment group was 95.23%, and that of the control group was 80.00%, there was significant difference between the two groups, $P<0.05$; Before operation, there was no significant difference in JOA score, NDI index score, and VAS score between the treatment group and the control group ($P>0.05$); there was no significant difference after 1 week ($P>0.05$), but there were significant differences between the two groups 2 weeks and 3 weeks after operation ($P<0.05$). ***Conclusion:*** Acupotomy trinity lysis is a safe, effective and economical treatment for cervical spondylotic myelopathy.

Key words: Acupotomy trinity lysis; Cervical spondylotic myelopathy; Liver and kidney deficiency; Clinical research

Publication date: January, 2021

Publication online: 31 January, 2021

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1 Introduction

Cervical spondylotic myelopathy is caused by the degeneration of the cervical intervertebral disc tissues, which causes the changes in other structures of the cervical spine, such as herniated disc, osteophyte formation, articular process hypertrophy, ligamentum flavum hypertrophy, and lamina hypertrophy, and other clinical syndromes caused by spinal cord compression[1]. This disease is a common clinical disease and frequently-occurring disease. It is characterized by numbness of the limbs and movement difficulties, which cause serious impacts on the work and daily life of the patients. There are many clinical treatment methods. Among them, surgery is the best, but all surgeries are invasive, and the indications for surgery are limited, and they are not easily accepted by patients[2]. In recent years, with the continuous progress of acupotomy and the improvement of treatment technology, the application of acupotomy therapy for cervical spondylotic

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myelopathy has been increasingly recognized by the majority of patients[3]. Traditional acupotomy treatment is mainly based on pressing tender points[4], and there are frequent shortcomings of ineffectiveness after acupotomy treatment, or high efficiency but low cure rate[5]. In this study, the acupotomy Trinity lysis therapy for treating cervical spondylotic myelopathy was created based on Professor Liu Fangming[6]'s principle of acupotomy lysis of cervical acupoints for the treatment for vertebral artery type cervical spondylosis, that is, to destroy the pathological framework of cervical spondylosis and restore the mechanical balance of the neck[5] by releasing the scars, contractures and adhesions of the soft tissues around specific acupoints on the whole spinal zone with acupotomy, which will gradually fill the fibrous annular fissure with granulation and fibrous tissue, and adjust the internal balance of the intervertebral disc, so as to reduce the compression of the cervical spinal cord, improve the blood supply to the spinal cord, and achieve the purpose of reducing clinical symptoms. This treatment scheme is suitable for the early and middle stages of cervical spondylotic myelopathy, and good clinical effects have also been achieved even in several patients who were preparing for surgery or suffer from postoperative recurrence, therefore it is worthy of clinical application.

1 Clinical Data

1.1 General Data

Cases in this study were selected from the inpatients at the Department of Acupuncture and Moxibustion of Binzhou Traditional Chinese Medicine Hospital from February 2016 to December 2019, where 205 patients with liver and kidney deficiency syndrome type cervical spondylotic myelopathy who met the inclusion criteria were admitted. The patients received acupotomy trinity lysis (experimental group, n=105) and traditional lysis of Ashi acupoints on the affected vertebrae (control group, n=100) respectively, of which there were 65 males and 40 females in the experimental group, aged 45-74 years old, on average (56.38±4.62) years old; control group consisted of 50 males and 50 females, aged 47-75 years old, on average (55.61±4.39) years old, there is no significant difference in the general data between the two groups (P>0.05).

1.2 Diagnostic Criteria

According to the "Criteria of Diagnosis and Therapeutic Effect of Diseases in Traditional Chinese Medicine"[7], there were typical clinical manifestations of cervical spondylotic myelopathy, as well as cases matching imaging examinations. Cervical spondylosis can be divided according to the syndromes: (1) wind-cold dampness; (2) stagnation of qi and blood stasis; (3) phlegm dampness blocking the collaterals (4) liver and kidney deficiency; (5) deficiency of qi and blood. This study mainly included patients with liver and kidney deficiency syndrome: clinical manifestations such as dizziness, headache, tinnitus and deafness, insomnia, numbness of the limbs, red eyes, red tongue and reduced salivation, and stringy narrow (xianxi) pulse, etc.

1.3 Inclusion Criteria

(1) Meet the above diagnostic criteria for cervical spondylotic myelopathy and the syndromatic diagnostic criteria for liver and kidney deficiency type cervical spondylosis.

(2) Age from 45 to 75 years old, regardless of gender.

(3) Participate voluntarily, obey the doctor's arrangement, and cooperate with treatment and follow-up.

(4) Patients' informed consent.

1.4 Exclusion Criteria

(1) Those who do not meet the above diagnostic criteria and inclusion criteria.

(2) Patients with cervical spine fractures, trauma, tuberculosis, other types of cervical spondylosis and shoulder tumors.

(3) Those whose symptoms were caused by medical diseases such as cerebrovascular disease.

(4) Patients with coagulation disorders such as anemia, thrombocytopenic purpura, hemophilia, etc.

(5) Pregnant or lactating women;

(6) Patients with severe primary diseases of endocrine, heart, liver and kidney, mental disorders and tumors etc.

2 Treatment Methods

2.1 Treatment Method of the Experimental Group

(1) Acupoint selection: refer to the seventh edition textbook of TCM Acupuncture and Moxibustion for

positioning: Heaven position (tianwei) – Naokong and Naohu acupoints; Human position (renwei) - Dazhui, Quyuan, and Tianzong acupoints; Earth position (diwei) - Ganshu, Shenshu, and the Ashi acupoints of the third lumbar vertebrae (Zhi Shi acupoints).

(2) Operation: In the sterile treatment room, the patient lies prone on the treatment bed, determine the acupoints and label, then routinely disinfects with 0.75% iodophor sterile cotton ball, and cover the body with sterile small-hole towel. Subcutaneous injection of 0.5ml of 1% lidocaine for local anesthesia, holding a type Ⅰ needle-knife, with the knife edge line parallel to the direction of the muscle, according to the four-step needle insertion acupotomy method, fully relax layer by layer, which can dredge the meridians and regulate the internal organs. During the treatment process, there will be local soreness, numbness, swelling, and electrified sensation, etc., and the treatment effect is better with radiating sensation at meridians on the lesions. The needle-knife was withdrawn, the puncture hole was pressed for 1 minute, and then covered with band-aid. After the operation, the patient was instructed to lie down for 40 minutes without touching water for 72 hours.

2.2 Treatment Method of the Control Group

(1) Acupoint Selection: Ashi acupoints, tender points beside the spinous process of the affected vertebrae.

(2) Operation: In the aseptic treatment room, the patient adopts the prone position, and the acupoints were labelled and sterilized. According to the four-step method, determine the acupoints and direction, then press and insert the needles. The needle-knife was withdrawn when the articular capsules of the affected vertebrae loosen; the remaining part of the operating procedure is the same as that of the experimental group.

Both groups were treated once a week, with 3 weeks as one course of treatment, and the curative effect was evaluated after one course of treatment had been completed.

2.3 Criteria of Treatment Efficiency Judgment

Refer to the "Criteria of Diagnosis and Treatment Efficiency for Diseases and Syndromes in Traditional Chinese Medicine" issued by the State Administration of Traditional Chinese Medicine in 1994[8]. Judgment of clinical efficiency: based on the improvement rate of symptoms. Cured: improvement rate ≥90%; markedly effective: improvement rate ≥75%, <90%; effective: improvement rate ≥30%, <75%; ineffective: improvement rate <30%.

The "Visual Analog Scoring Method" uses the VAS card produced by the Pain Medicine Society of the Chinese Medical Association. The higher the score, the greater the pain intensity.

Improvement of Neck Disability: The Neck Disability Index (NDI) questionnaire was used to evaluate the improvement of neck disability before and after acupotomy treatment. The lower the score, the better the improvement of neck disability.

2.4 Statistical Processing

The SPSS20.0 statistical software was used for data statistical analysis. Measurement data are expressed as mean ± standard deviation ($\bar{x} \pm s$). Quantitative data were compared by variance analysis, chi-square test should be used for inter-group count data comparison, and rank-sum test was used for ranked data comparison. $P<0.05$ is considered statistically significant, $P<0.01$ is considered prominently statistically significant.

3 Results

3.1 Comparison of Clinical Treatment Efficiency

The clinical treatment efficiencies of the two groups were compared. After treatment, the treatment efficiency of the experimental group was 95.23%, which is higher than 80.00% of the control group ($P<0.05$), see Table 1.

Table 1. Comparison of Clinical Treatment Efficiency between the Two Groups (*n*, %)

Group	*n*	Cured	Markedly Effective	Effective	Ineffective	Total Efficiency
Experimental	105	5	65	30	5	95.23%
Control	100	5	60	15	20	80.00%*

3.2 Comparison of VAS Scores between the Two Groups of Patients

Table 2. Comparison of VAS Scores between the Two Groups (n, $\bar{x} \pm s$)

Group	*n*	Before Surgery	1 Week after Surgery	2 Weeks after Surgery	3 Weeks after Surgery
Experimental	105	5.90±1.52	4.32±2.28	2.72±1.44	1.73±1.22
Control	100	6.03±1.60	4.68±2.54	3.78±1.81	2.10±1.52

In comparison between groups, the comparison of VAS scores between the two groups before surgery was not statistically significant. One week after operation, the VAS scores of the two groups were significantly reduced. The experimental group was slightly better than the control group. The difference between the groups was not statistically significant, $P>0.05$; 2 weeks after the operation, the VAS scores of the two groups were significantly reduced. The experimental group was better than the control group, and the inter-group comparison is statistically significant, $P<0.05$; 3 weeks after the operation, the experimental group was significantly better than the control group, and the comparison between the groups is statistically significant, $P<0.01$. Comparing different time points, the two groups were markedly statistically significant before and after operation, $P<0.01$.

3.2 Comparison of JOA Scores between the Two Groups of Patients

Table 3. Comparison of JOA Neurological Function Scores between the Two Groups (n, $\bar{x} \pm s$)

Group	*n*	Before Surgery	1 Week after Surgery	2 Weeks after Surgery	3 Weeks after Surgery
Experimental	105	9.35±1.27	12.62±1.46	13.52±2.34	14.16±3.15
Control	100	9.40±1.30	11.98±1.70	12.48±5.12	12.79±3.58

In comparison between groups, the comparison of JOA neurological function scores between the two groups before operation was not statistically significant. After 1 week, the JOA scores of the two groups improved, the experimental group was slightly better than the control group, the difference between the groups was not statistically significant, $P>0.05$; 2 weeks after the operation, the JOA scores of the two groups improved significantly, the test group Better than the control group, the inter-group comparison is not statistically significant, $P>0.05$; 3 weeks after the operation, the test group is better than the control group, and the comparison between the groups is statistically significant, $P<0.05$. Comparing different time points, the two groups were markedly statistically significant before and after operation, $P<0.01$.

3.3 Comparison of NDI Scores between the Two Groups of Patients

Table 4. Comparison of NDI Scores between the Two Groups (n, $\bar{x} \pm s$)

Group	*n*	Before Surgery	1 Week after Surgery	2 Weeks after Surgery	3 Weeks after Surgery
Experimental	105	39.65±9.50	17.62±4.28	15.52±3.34	12.16±3.05
Control	100	39.70±9.37	18.98±5.34	17.48±3.97	14.32±4.25

In comparison between groups, the NDI scores of the two groups of patients before operation were not statistically significant. One week after operation, the NDI scores of the two groups were improved, with the experimental group slightly better than the control group, the difference between the groups was not statistically significant, $P>0.05$; 2 weeks after the operation, the NDI scores of the two groups improved significantly, with the experimental group being better than the control group, the inter-group difference in comparison was not statistically significant, $P>0.05$; 3 weeks after the operation, the experimental group was better than the control group, the comparison between groups was not statistically significant, $P>0.05$. For comparisons between different time points, the two groups were markedly statistically significant before and after operation, $P<0.01$.

4 Discussions

Cervical spondylotic myelopathy accounts for 10% to 15% of cervical spondylosis. As the degenerative structure of the cervical spine compresses the

spinal cord, it is the most severe type of cervical spondylosis[9]. The symptoms are severe and the disability rate is high. It is unanimously agreed that cervical spondylotic myelopathy should be treated with surgery as soon as possible to avoid irreversible damage to the spinal cord and nerve tissues, but at the same time, it is also proposed that the surgical indications should be strictly controlled, and surgery should be performed under the premise that conservative treatment is ineffective[10]. There are many methods to treat cervical spondylotic myelopathy in traditional Chinese medicine, including internal treatment and external treatment. Practice and scientific research have proved that the curative effect of traditional Chinese medicine in the treatment of cervical spondylotic myelopathy is definitive, low cost, low risk, and easily accepted by patients. However, a standardized clinical treatment mode has not yet been established, which has greatly affected the development and innovation of traditional Chinese medicine treatment of cervical spondylotic myelopathy. Cervical spondylotic myelopathy is equivalent to the category of "arthralgia" and "flaccid paralysis" in traditional Chinese medicine. Its lesion is at the cervical spinal cord, which is attributed to neck injuries from overworking, plus externally infected pathogens, internal injuries in liver and kidney, bone marrow drying up and imbalance of blood and qi at the neck[11]. Chinese medicine treatment mainly focuses on tonifying liver and kidney, and nourishing tendons and bones. Currently, traditional conservative treatment methods such as acupuncture, massage, traction, and physiotherapy are not effective[12]. In recent years, with the development of acupotomy, acupotomy lysis has achieved good clinical effects in the treatment of cervical spondylotic myelopathy, that is, acupotomy lysis is performed on the upper and lower interspinous ligaments and the posterior joint capsules on both sides of the affected vertebrae. That is, by relaxing the local Ashi acupoints of the affected vertebrae, the internal and external balance of the cervical spine can be restored, the pressure on the cervical spinal cord can be relieved, the blood supply can be improved, and the clinical symptoms can be reduced. Since the treatment directly acts on the cervical spine and is carried out under blindsight, there are certain risks and difficulties in the treatment, which limits the clinical application and promotion of this technique.

The treatment of cervical spondylotic myelopathy with acupotomy trinity lysis is based on the characteristics and anatomy of the acupoints. The acupotomy is performed locally and as a whole, that is, the local area is mainly based on the cervical acupoints[13], and the distal end takes the spine as the center, where the Du Channel and Bladder Meridian acupoints were selected for treatment. Take Heaven positions (tianwei) - Naokong acupoints and Naohu acupoints; Human positions (renwei) - Dazhui acupoints, Quyuan acupoints, and Tianzong acupoints; Earth positions (diwei) - Ganshu, Shenshu, and Ashi acupoints of the third lumbar vertebra (Zhishi acupoints) as insertion points, penetrate deep into the bone surface for longitudinal dredging and peeling, and use 3-5 needle-knives for each acupoint to adjust the body's internal organs and meridians holistically, that is, "Trinity Lysis". The Naokong acupoint is the junction acupoint of Foot Shaoyang Meridian and Yangwei Meridian, which can relieve the gallbladder meridian, promote the clearing and ascension of yang, and smoothen the qi circulation. It is located at the upper attachment point of the atlantooccipital fascia. Naohu is the junction acupoint of the Du Channel and the Foot Taiyang Meridian, located in between the left and right occipital muscles. The subfascia is a branch of the greater occipital nerve, which can improve cervical spine flexion and head rotation. Tianzong is the meridian acupoint of Hand Taiyang meridian, which can relieve shoulder and back pain, numbness and radiating pain of upper limbs. Quyuan is the meridian acupoint of the Hand Taiyang Meridian. It is located at the attachment points of the trapezius muscle, rhomboid muscle and levator scapula. It can treat neck and shoulder discomfort. Dazhui acupoint is the junction acupoint of the Liuyang Meridians of the hands and feet and the Du Channel, located under the spinous process of the seventh cervical vertebra, which is linked to the Du Channel and can relieve neck pain and upper limb numbness and pain. The releasing of the acupoints at Heaven positions and Human positions plays a direct role in reducing compression of the spinal cord. Ganshu and Shenshu are acupoints of the bladder meridian, which can nourish the liver and kidney, relax the tendons and activate collaterals, improve the symptoms of patients' lower limbs and increase the long-term curative effects. The skin below Shenshu acupoint is thicker and the subcutaneous tissue is

denser. The deep structures include thoracolumbar fascia, erector spinae, quadratus lumbar muscles, and kidneys, etc.; below Ganshu acupoint are inferior trapezius, latissimus dorsi, and sacral spinous muscles, and the deep part of the acupoint corresponds to the pleural cavity. Therefore, too deep acupuncture can damage the kidneys, pleural cavity and other structures. In order to increase the safety factor, for those who are not skilled in the operation, the corresponding horizontally shift Jiaji acupoints can be relaxed.

5 Conclusions

Acupotomy trinity lysis for the treatment of liver and kidney deficiency type cervical spondylotic myelopathy is effective, safe, reliable, cost-saving, and repeatable. Compared with releasing the Ashi acupoints on the affected cervical vertebrae, working on Ashi acupoints around the neck and the third lumbar vertebrae, bladder meridian and other meridians simultaneously to avoid the high-risk parts of cervical vertebrae can reduce operation risk and difficulty, and achieve the purpose of treating both symptoms and root causes. It is relatively safer, easier to master, and easier to promote in clinical applications.

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Journal of Clinical and Nursing Research

Research Article

Observations on the Preventive Effects of Anti-infective Treatment on Wound Infection in Emergency Surgery

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Abstract: ***Objective:*** To explore the preventive effects of anti-infective treatment on wound infection in emergency surgical trauma. ***Methods:*** 180 patients in our hospital from 2019 to June to May 2020 were selected as subjects. The 180 patients were randomly divided into two groups. The control group had 90 cases and adopted the conventional treatment method, and the experimental group received anti-infective treatment. The wound healing, infection status, and patient satisfaction of the two groups of patients were analyzed. ***Results:*** The wound healing, infection status, and patient satisfaction of the experimental group were better than those of the control group. ***Conclusion:*** The application of anti-infective treatment to the prevention of wound infection in emergency surgical trauma can reduce the infection rate of the patients' incision and promote the recovery of patients. It is suitable for clinical applications.

Keywords: Anti-infective treatment; Emergency surgery; Surgical trauma incision infection; Prevention

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

With the rapid development of various industries in the society, the incidence of trauma is also increasing. The most common complication in trauma patients requiring trauma treatment is postoperative wound infections. Since the severity of the infection directly determines the prognosis of the patient, prevention of infections in the emergency department is crucial. Through data analysis, Chen Zehua[1] et al. found that several indicators such as age, BMI, TS score, and operation time show clear correlations. When encountering patients with low scores, medical staff need to be vigilant and discover early to prevent the incidence of incision infection to the greatest extent; Yang Yanyan[2]'s research shows that once incision infection occurs, it will affect the patient's recovery and postoperative recovery; Zhong Chao[3]'s research shows that emergency surgical trauma is mainly due to complicated conditions, so active nursing intervention after the patient's operation is required to prevent the patient's wound from worsening or infection; Huang Wen[4]'s studies have shown that reasonable preventive care can effectively control the incidence of complications and promote the speed of wound healing. Through the reading and understanding of these literatures, this paper divided 180 patients in our hospital to study the effects of anti-infective treatment on the prevention of emergency surgical trauma incision infection. The report is as follows.

2 Data and Methods

2.1 General Data

180 patients in our hospital admitted between 2019-June and May 2020 were selected as subjects. The 180 patients were randomly divided into two groups. The control group had 90 cases and adopted conventional treatment methods, whereas the patients in the experimental group received anti-infective treatment. The patients were informed of all treatment and the experimental processes and had given their consent. Patients suffering from combined tumors,

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severe cardiovascular disease, and liver and kidney function insufficiency had to be excluded from this study. The basic data such as the gender of the patient has no influence on this study.

2.2 Methods

Patients in the control group received conventional treatment. Regular wound cleaning was performed, the wounds were disinfected and debris were removed with saline and regular disinfectants. After the wounds were treated, patients were sent to the operating theatre and routine nursing intervention was carried out after surgeries.

After the doctor determined the degree of trauma according to the existing group, the patients in the experimental group received the corresponding anti-infective treatment: oral tetracycline 0.25 to 0.50g/time, 6 hours/time, oral administration of 1.0 to 2.0g/time or muscle pipecolic acid injection, 1-2ml/time injection is normal operation, general nursing intervention after surgery.

Postoperative care was carried out according to the doctor's judgment on postoperative wound infection. Mild infection: the wound was disinfected with alcohol and iodophor, irradiated with a specific electromagnetic wave treatment device (TDP) lamp and oral antibacterial agent was given if necessary, moderate infection: drainage during debridement, late TDP lamp irradiation, oral antibacterial agent was given, severe infection: the dressing was removed, the area of incision was washed with saline, the open wound was drained into the drainage tube, antibacterial agents were given, and then waited for new granulation to grow.

2.3 Observation Indicators

Comparing the wound healing, infection status and satisfaction of the two groups of patients after treatment, the satisfaction in this paper adopted an anonymous questionnaire survey, which is divided into three levels, very satisfied with (9, 10) points, and relatively satisfied with (6, 9] points, dissatisfaction is 6 points or less.

2.4 Statistical Methods

SPSS23.0 statistical software was used to process the data. Count data is expressed as rate (%) and checked using χ^2 test; rank data was checked with rank-sum test. $P<0.05$ indicates that the difference is statistically significant.

3 Results

3.1 Comparing the Incision Healing Status and Infection Status in Two Groups of Patients after Treatment

This study have shown that the incision healing rate of the control group is significantly lower than that of the experimental group, and the infection status of the experimental group is significantly lower than that of the control group.

Table 1. Comparison of the Incision Healing Status and Infection Status in Two Groups of Patients after Treatment [*n*(%)]

Group	No. of Cases	Good Incision Healing	Infection
Control	90	65 (72.22)	25 (27.78)
Experimental	90	85 (94.44)	5 (5.56)
χ^2		12.331	16.111
P		<0.05	

3.2 Comparing Patient Satisfaction in the two Groups

The patient satisfaction of the experimental group is significantly higher than the control group.

Table 2. Comparison of Patient Satisfaction between the Two Groups

Group	Very Satisfied	Satisfied	Dissatisfied
Control (*n*=90)	45 (50.00)	25 (27.78)	20 (22.22)
Experimental (*n*=90)	65 (72.22)	20 (22.22)	5 (5.56)
P		<0.05	

3 Discussions

Surgical trauma is a common disease in emergency rooms. This is usually very critical and requires timely and effective treatment. Otherwise, it may endanger the patient's life. Trauma can have

many effects on the health and quality of life of patients. The symptoms are relatively complex. During surgical treatment, bacteria can easily enter the bloodstream, increasing the possibility of incision infection. Patients with surgical trauma are encouraged to take all preventive and control measures[5]. Prevention of infection before surgery mainly lies in wound healing. The most commonly used method is to clean with saline, cleaning fluid and hydrogen peroxide. Meanwhile, medical staff should pay special attention to hand disinfection during the operation, and perform personal hygiene and cleaning procedures to reduce the incidence of infection. The first step to prevent wound infection in patients with surgical trauma is to pay close attention to wound pain and limb circulation, and to monitor the patient's body temperature, skin color, and swelling. Strictly follow the principle of sterilization when changing the dressing to minimize the incidence of infection. Incision infection after surgical trauma is one of the main forms of nosocomial infection, and its incidence accounts for about 1/10 of the total number of nosocomial infections that seriously affect the prognosis of patients. Operating theatre environment, aseptic conditions and operation time mainly affect wound infection after emergency surgical trauma. Summer is the season of high incidence of nosocomial infections. In order to reduce infections, laminar flow operating rooms should be actively built to ensure clean air and strengthen sterile operations.

There are many domestic and foreign researches on nosocomial infections, especially postoperative wound infections in patients with emergency surgical trauma. Some scholars recommend anti-infective treatment for the conventional removal and disinfection of wounds to effectively prevent postoperative infections and improve the prognosis of patients. Anti-infective treatment can effectively reduce the chance of wound infection in patients with emergency trauma surgery, and its clinical effect is significant[5]. The relevant research on anti-infective treatment was carried out at the incision site of emergency trauma surgery, and the quality of wound disinfection was compared with the incidence of infection after conventional disinfection and anti-infection treatment. The approved anti-infective treatment plan is as follows: The research on oral tetracycline combined with intramuscular pipecolic acid injection shows that anti-infective treatment can effectively reduce the risk of wound infection in emergency surgical trauma, promote wound healing as soon as possible, and improve the quality of wound healing. In the study, by referring to relevant literature, it was believed that by combining the mechanism of action of existing antibacterial agents, tetracycline and pipecolic acid injections can be used as anti-infective agents. Tetracycline is a broad-spectrum antibacterial agent with good bactericidal effects, a wide range of action and strong action, but bacteria can become resistant to it and it needs to be used in combination with other antibacterial agents to enhance its anti-infection effects. Pipecolic acid injection is effective against Staphylococcus or sensitive Gram-negative bacilli. When pipecolic acid injection is used in combination with tetracycline, it can inhibit or kill pathogenic bacteria that usually cause incision infections in patients with emergency surgical trauma and reduce the risk of postoperative infection.

In conclusion, the application of anti-infective treatment to the prevention of wound infections in emergency surgical trauma can reduce the infection rate of the patient's incision, promote the recovery of the patient, and is suitable for clinical applications.

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Journal of Clinical and Nursing Research

Research Article

Analysis on the Clinical Effects of Emergency Surgical Treatment on Patients with Acute Abdominal Pain

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Abstract: ***Objective:*** To study the clinical effects of emergency surgery in treating patients with acute abdominal pain. ***Methods:*** 60 patients admitted to our hospital between January 2019 and December 2019 were randomly selected as subjects, and the incidence of complications and mortality of the patients were observed. ***Results:*** Among the 60 patients, definitive diagnosis was obtained during the operation and there was no mortality. After the operation, they were transferred to other relevant departments for continued treatment. Among the 60 patients, 4 cases had complications, accounted for incidence of 6.67%. ***Conclusion:*** The diagnosis of emergency surgical treatment based on acute abdominal pain avoided misdiagnosis and realized non-invasive diagnosis, and provided a valid reference for avoiding overtreatment.

Keywords: Emergency surgery; Acute abdominal pain; Clinical effect

Publication date: January, 2021
Publication online: 31 January, 2021
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Acute abdominal pain is generally one of the common diseases encountered in the emergency department of hospitals. The cause is complex and rapid. Dao Min[1] et al. studied the reasons for misdiagnosis of 10 patients with acute abdominal pain and pointed out that the subjective factors that led to the misdiagnosis included poor understanding of the patient's condition, incomplete theoretical knowledge, failure to conduct a comprehensive examination on the patient, and unnecessary auxiliary examinations for the patient, etc., should be changed to avoid this phenomenon in the emergency department; Wang Junping[2] pointed out that broadening the scope of professional knowledge and understanding the patients' conditions in detail can help reduce the rate of misdiagnosis; Li Zhaosheng[4] proposed that emergency surgeons need to have rigorous diagnosis and treatment concepts, as well as solid diagnosis and treatment techniques, be good at dialectical thinking, and be able to give reasonable diagnosis and treatment opinions. This paper uses 60 patients with acute abdominal pain in the emergency department of our hospital admitted in 2019 as an example to study the clinical effects of emergency surgery in treating patients with acute abdominal pain.

1 Data and Methods

1.1 General Data

60 patients admitted to our hospital between January 2019 and December 2019 were randomly selected as subjects, the patient's age, gender and other factors do not affect the content of the study, and all subjects had no history of other psychiatric diseases and heritable diseases, etc. before admission. The patients had been informed of the content of the study, the consent of the patients and the patients' family had been obtained, and the study had been approved by the ethics committee, so the study is researchable.

1.2 Methods

The patient had acute abdominal pain as the first symptom. When the patient was admitted to the hospital, the severity of the disease was assessed according to the Glasgow Outcome Scale (GOS). The green channel was opened to seriously ill patients and the patients were sent to the emergency room for rescue. All patients in this study suffered from

general acute abdominal pain. After hospitalization, routine symptomatic treatment (such as painkillers, antispasmodics, and correction of fluid and electrolyte disturbances and hypoxia) can be closely monitored for changes in the conditions. Basic tests such as hematuria, blood sugar, and blood electrolytes were performed; 25 fertile women were ruled out of ectopic pregnancy by checking the human chorionic gonadotropin subunit (-HCG) in the blood or with urine pregnancy test. Serum enzymes and electrocardiogram were also needed to rule out myocardial infarction in 53 patients with upper abdominal pain, ultrasound examination was performed on patients with lower abdominal pain, and blood gas analysis was performed in 51 patients. After excluding ectopic pregnancy and myocardial infarction, the past medical history and eating habits were inquired. Among them, 24 patients had chronic abdominal pain, 2 had abdominal surgery, and 5 had cholelithiasis. Combined with medical history and ultrasound scan, it was still impossible to judge. X-ray examination of the chest and abdomen had been completed, and the initial assessment time was 20 to 40 minutes. After the initial diagnosis, other tests were performed based on the diagnosis results, and if acute pancreatitis was diagnosed, an amylase test was performed.

After the diagnosis was basically confirmed, treatment was planned based on the patient's diagnostic results (especially ultrasound diagnosis). All patients were transferred to emergency surgery, including 16 cases of laparoscopic surgery, 41 cases of laparotomy and 3 cases of abdominal lavage. In laparoscopic surgery, the surgical calibers in 14 cases of the standard three-ball surgery were partially adjusted according to the affected area. 4 cases of abdominal surgery had original scars by caesarean section. A detailed search was conducted to determine the location of the lesion during the operation, and 4 cases of laparoscopic surgery were converted to open surgery. After the diagnosis is confirmed by checking, appropriate treatment strategies were adopted, such as appendectomy, cholecystectomy, cholecystectomy, gastric perforation repair, and interstitial gallbladder drainage.

1.3 Observation Indicators

The incidence of complications and mortality in patients were observed.

1.4 Statistics Methods

The data was summarized, the number of cases was calculated, and entered into Excel table under two-person review, and the SPSS 21.0 software package was used for statistical analysis. Chi-square analysis was applied. Test standard $\alpha = 0.05$.

2 Results

All 60 patients received a clear diagnosis during the surgery, and no mortality occurred. After the surgery, they were transferred to other relevant departments for continued treatment. Among the 60 patients, 4 had complications, accounted for incidence of 6.67 %. See Table 1 for details.

Table 1. The Incidence of Complications and Mortality in Patients

No. of Cases	Mortality	Situation of Complications *n*(%)
n=60		4(6.67%)
Detailed Situations	None	1 case was re-operated for acute appendicitis with residual fluid and abdominal abscess; 1 case of incision infection, 1 case of postoperative intestinal obstruction, 1 case of biliary fistula

3 Discussions

Non-traumatic acute abdominal pain is very common in emergency rooms. Acute abdominal pain has many causes and involves many diseases. Rapid diagnosis plays an important role in subsequent treatment. In addition, most patients who have undergone acute abdominal surgery require emergency surgery. The diagnosis should be made based on the patient's medical history and physical examination results to ensure the best timing for surgery. Some data show that acute gastroenteritis and appendicitis are more dominant in minors, while acute pancreatitis is more dominant in young and middle-aged people. This may be related to long-term unreasonable diet, overeating and alcoholism at this age. There are more elderly patients with intestinal obstruction, which may be related to the lack of gastrointestinal motility at this stage of life[2]. There are several types of acute abdominal pain, including visceral, physical, and related abdominal pain. The mechanism is very complicated, mainly visceral pain. Obviously,

the type and cause of abdominal pain in patients with acute abdominal pain will affect the surgical treatment process. Usually, when patients are having acute abdominal pain, it is mainly caused by smooth muscle spasm such as the intestines and bile ducts; when patients show persistent abdominal pain, it is mainly caused by acute intraperitoneal infection and perforation[3]. Confirm the specific nature and location of pain in patients with acute abdominal pain, provide an effective reference for preliminary judgment of the cause of the patient, and on this basis, combine with ultrasound to further diagnose, and provide reference and data for surgical exploration and treatment[4]. According to the spectral analysis of emergency surgical diseases, acute appendicitis, cholecystitis, and gastrointestinal perforation are common causes of acute abdominal pain, and surgical treatment is the main treatment method. Critically ill patients must be opened to green channel for rescue treatment[5]. Relevant information shows that when encountering patients with general acute abdominal pain, doctors should learn more about the patient's medical history, choose appropriate auxiliary diagnosis methods, clarify surgical indications, and strengthen quality control. A detailed understanding of the medical history can reduce the misdiagnosis of ectopic pregnancy without hiding personal information such as the patient's sexual life. In this case, appropriate auxiliary diagnosis can avoid treatment delay by early diagnosis, and appropriate surgical indications can accurately assess whether the patient can receive conservative treatment and avoid damage to the body due to overtreatment[5]. According to relevant data, the application of emergency surgery to the diagnosis of acute abdominal pain requires a clear preoperative diagnosis, a clear need for surgical treatment of the patient, whether the patient can tolerate the surgery, puncture drainage, and the rational application of irrigation techniques. Emergency surgery includes laparoscopy and open surgery. Laparoscopic treatment is usually minimally invasive, with minimal surgical damage, faster postoperative recovery and fewer complications[6]. For example, for patients with appendicitis, laparoscopic appendectomy is very effective, so the operation safety is high, the operation time is short, the postoperative recovery time is short, and the postoperative aesthetics is high. However, laparoscopy is very difficult and requires high-level skills of the surgeon, and lack of skills can increase vascular damage during surgery[7]. Similarly, laparoscopic surgery cannot determine whether patients with acute abdominal pain need surgery. Therefore, emergency surgery is the gold standard for diagnosing acute abdominal pain, avoiding unnecessary trauma, misdiagnosis and failure in certain patients, and it provides an effective reference for the selection of surgical methods.

In conclusion, acute abdominal pain is a common situation in the emergency room, and most patients with abdominal pain require urgent care in the emergency room. Acute abdominal pain is characterized by sudden onset and complicated etiology, leading to poor prognosis for the patient, and may be life-threatening in severe cases. Emergency surgical treatment diagnosis on acute abdominal pain avoids misdiagnosis and realizes non-invasive diagnosis, and provides effective reference for avoiding excessive treatment.

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Journal of Clinical and Nursing Research

Research Article

Understanding the Mechanism of Sun Simiao's Treatment of Stroke from the Perspective of the Divergence of Pungent Medicine

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Abstract: In ancient times, the application of Xuming Decoction was popular in the treatment of stroke. Sun Simiao was a famous physician in treating stroke disease in his times. He inherited the theme of Xuming Decoction for treating wind with pungent herbs. This paper focuses on reviewing Sun Simiao's application of Xuming Decoction in "Qianjin Yaofang", we re-apprehend the mechanism of Sun Simiao's treatment of stroke from the perspective of the divergence of pungent medicine.

Keywords: Sun Simiao; Xuming Decoction; Stroke; Pungent Medicine

Publication date: January, 2021
Publication online: 31 January, 2021
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Stroke disease (zhong feng), also known as apoplexy (zu zhong), is a symptom of hemiplegia, numb skin, crooked tongue, inarticulateness, and even sudden fainting and unconsciousness[1]. The incidence of stroke has been increasing in recent years. The prognosis is poor and seriously endangers the health of patients. Therefore, it is of great significance to reduce the sequelae of stroke, speed up recovery, increase the survival rate of patients, and improve the quality of life.

1 The Origin of Xuming Decoction

The Xuming (life-sustaining) Decoction was first recorded in the chapter "Stroke and Gout Disease" in the book "Jinkui Yaolue (The Synopsis of the Golden Chamber)" authored by Zhang Zhongjing in the Eastern Han Dynasty. In the chapter, the etiology, pathogenesis, clinical manifestations, diagnosis and treatment of stroke had been discussed in depth. Before the Tang and Song dynasties, the treatment of stroke was guided by the theory of "internal deficiency and evil", and the Xuming Decoction was used as the basis of prescription. With modifications to the prescription tailored accordingly, the treatment effect was very good. The compatibility of the pungent medicines in the Xuming Decoction is its unique characteristic. In his magnum opus "Qianjin Yaofang (The Essential Prescriptions Worthy of Thousand Golds)", Sun inherited the thoughts of his predecessors and systematically explained the etiology, pathogenesis, treatment methods and prescriptions of stroke, and put forward new points of view. Sun inherited the philosophy of using pungent medicines Xuming Decoction in the clinical treatment of stroke, and discussed in details on the different syndromes of stroke. The clinical effects of prescriptions based on modified Xuming Decoction were definitive and significant.

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2 Brief Analysis on the Characteristics of Sun's Treatment Style

2.1 Reuse sweat method

Sun Simiao had a deep understanding on the diagnosis and treatment of stroke. He included "Ancient and Modern Xuming Decoctions" in "Qianjin Yaofang", and he was full of praise for its wonderful effects of treating stroke. He thought that "Wind often invades other internal organs from the five internal organs from the back... It can be saved by taking the Xuming Decoction urgently." Sun divided stroke into four major categories: "partial dryness, wind rash, wind yi, and wind numb". It was believed that the disease is mainly caused by wind evil, and if the qi of wind is unbalanced, it will cause "the whole body to become rigid and the pores occluded". The treatment method should be mainly based on the sweating method, “if someone needed to sweat but did not sweat, his pores will become occluded, causing him to die from stuffiness”. It was pointed out that when taking the decoction for treating stroke, it is better to make the head, face, hands, feet, stomach and back sweat constantly. It was believed that in the treatment of stroke, profuse sweating is appropriate, and Xuming prescriptions are suitable. “Therefore, there are ephedra in all wind prescriptions...so it is known that the patient cannot be cured without sweating." It can be seen that ephedra is indispensable in stroke treatment prescriptions. Ephedra can not only make one sweat and dispel evil from both surface and interior, but can also enter the interior to break the accumulation of the symptoms[2].

Sun believes that "stroke patients usually heaty", and the stroke starts from the heat in the interior. In the treatment method, attention should be paid to both the symptoms and the root causes. The Xuming Decoction is the basis for the treatment of stroke, and the heat-clearing medicine is for treating the symptoms. For those suffering from sudden stroke, treat the symptoms if it is urgent. It is emphasized that Zhuli (bamboo leeks) Decoction (zhuli, raw ginger juice, raw kudzu juice) should be used first to clear away heat and phlegm. After the symptoms are relieved, prescribe Xuming Decoction to clear the collaterals and nourish qi and blood. This was a rule for treating stroke as concluded by Sun. The "heat leading to stroke" theory pioneered by the Sun opened up new way of thinking for later generations to understand stroke and broke through the barriers of "external wind theory". The chilling medicines, such as antelope horn, bamboo leeks, and skullcap, which Sun supplemented in his Xuming Decoction prescriptions, became common medicines for calming the liver and extinguishing wind, clearing heat and eliminating phlegm during the Ming and Qing Dynasties[3, 4]. In addition, the application of sweating method should also take note of supplementing void and depleting solid.

2.2 Heavy Use of Pungent Medicines

Sun’s general medicine for the treatment of stroke is no other than Xuming Decoction. Observing the composition of many Xuming prescriptions, according to the nature and flavor of the medicine, pungent medicines predominate, such as: ephedra, guixin, aconite, dried ginger, chuanxiong, etc. Heavy use of pungent medicines is due to the fact that they can not only induce sweating and disperse the evil from the surface and interior, but also cleanse the stasis, clear the body fluid, nourish and invigorate, both cleansing and nourishing, and can be used for the symptoms of stroke, cold and heat, void and solid.

3 The Traditional Efficacy and Modern Research on Pungent Medicines

3.1 The Traditional Efficacy of Pungent Medicines

The first record of the effects of pungent medicines is found in "Suwen • Studies on the Laws of the Organs": "Sourness restricts astringencies, bitterness dries dampness, sweetness relieves urges, pungency disperses, and saltiness softens firmness". The pungent medicines can disperse and invigorate, dispel the evil from the surface and the interior, cleanse the blood stasis; make the blood flow to the whole body, so as to clear the qi and blood vessels, and then promote the blood supply to the human necrotic tissue and accelerate the recovery of its functions[5]. In addition, pungent medicine has the effects of moisturizing and nourishing, cleansing collaterals and removing blood stasis, raising and dispersing yang, and resuscitating etc.[6]

3.2 The Modern Efficacy of Pungent Medicines

Modern studies have shown that pungent medicines contain volatile oils, glycosides, alkaloids and other

components, of which volatile oils are the main components. Most of these components have strong biological activity. For example, pungent medicines mostly have antipyretic and sweat-inducing effects, and they cure by inducing sweating. The Nei Jing says that "the pungent enters and sweat comes out". In addition, most of them have antibacterial or antiviral effects, which confirms the scientificness of the theory that pungent medicines dispel 'evil' off the surface; their effects on the cardiovascular and cerebrovascular system are mainly manifested in the expansion of the coronary artery, increasing the systemic blood flow, and reducing myocardial oxygen consumption and vascular resistance, etc.; they have excitatory and inhibitory effects on the central nervous system, and improves the functional activities of the human body, anesthetic, sedative, painkilling, and anticonvulsions, etc.[7, 8]

4 Conclusions

Xuming Decoction was the standard treatment for stroke in ancient times. The application of ephedra, cassia twig, chuanxiong and other medicines in the prescription reflects the important role of pungent medicines in the treatment of stroke. Sun Simiao is a well-known expert in the treatment of stroke in his times. In the "Qianjin Yaofang", a dedicated chapter discusses the etiology, pathogenesis and treatment methods of stroke. Modified Xuming Decoctions were prescribed for most of the clinical syndromes, inheriting the theme of using pungent medicines in Xuming Decoction to treat stroke, inheriting the ancient wisdom and inspiring the future generations, and opened up new ways of thinking for later generations in treating stroke.

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Journal of Clinical and Nursing Research

Research Article

Unique Traditional Chinese Medicine Therapy for Painful Diabetic Peripheral Neuropathy

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Funding: Shaanxi Province 2020 Key Research and Development Program Project (2020SF-276); Xi'an Health Bureau Science and Technology Project (J201902018)

Abstract: Painful diabetic peripheral neuropathy is one of the common chronic complications of diabetes. "Pain" is the most typical symptom in patients, which seriously affects their quality of life. Traditional Chinese medicine (TCM) treatment of the disease includes oral administration of Chinese medicine, TCM fumigation and acupuncture, etc., which can significantly reduce the pain of patients and reduce the frequency of disease. Chinese decoctions regulate the imbalance of yin and yang in the human body through syndrome differentiation, so as to achieve the balance of yin and yang, which will then eliminate the disease. Chinese medicine fumigation make the medicine seep into the body from the skin to exert the medical effects, and nourish and dredge the meridians. There is no pain if the meridians are smooth flowing, there will be pain if the meridians are blocked, fumigation can be used alone or assisted by other treatment methods to enhance the efficacy. The characteristics of acupuncture are rapid pain-relief, economic and convenient, and can quickly relieve pain for patients with low tolerance.

Keywords: Painful Diabetic Peripheral Neuropathy; Traditional Chinese Medicine; Treatment Characteristics

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

Painful diabetic peripheral neuropathy (PDPN) is one of the common complications of diabetic peripheral neuropathy. With the increase in the incidence of diabetes, investigations have shown that the incidence of this complication can be as high as 10% to 26%[1]. Modern studies[2] have shown that high blood sugar damages Schwann cells in the human body and degenerates glial-axons, which ultimately leads to pain. Western medicine treatment drugs include: tricyclics and other antidepressants, anticonvulsants, opioids and non-opioid analgesics[3]. These drugs were found to have poor patient compliance during clinical use, and have more drug resistance and side-effects after long-term use. Seeking safer and more effective treatments has become the concern of PDPN patients. With the continuous development and progress of traditional Chinese medicine (TCM), it has attracted more attention. Whether TCM can effectively treat PDPN has become a hot topic of discussion.

TCM believes that the disease belongs to the category of "emaciation-thirst and numbness diseases (xiaoke bibing)". Chronic diabetes illness does not heal, deficiency of both qi and yin, blood cannot fill the veins, susceptible to exogenous evils, leading to disharmony between the ying (camp) and the wei (guard), the blood flow is not smooth and leads to pain. This pathogenesis is the same as the pathogenesis of blood numbness discussed in the "Jingui Yaolue • Xulao Bing" (Synopsis of the

Golden Chamber • Chronic Fatigue Diseases). Under the guidance of basic theories, TCM distinguishes the yin-yang imbalance of qi and blood, and uses TCM decoctions, TCM fumigation, acupuncture and other therapies to reduce pain, improve symptoms, and reduce the frequency of disease. A large number of clinical evidences have proved that TCM is effective in treating PDPN. Doctors should grasp the opportunity and devise the best treatment plan according to the patient's conditions and needs.

2 Oral Chinese Medicine

With syndrome differentiation under the guidance of the theory of TCM, TCM decoction is the most commonly used clinical treatment method, combining the unique experience of physicians to regulate the imbalance of qi and blood, and achieve the treatment of both symptoms and root causes.

2.1 Treatment Characteristics

First, prioritizing the "whole". TCM follows the holistic concept when treating PDPN and adjusts yin and yang, which not only relieves pain, but also regulates the physique susceptible to the disease. It is mentioned in the Neijing that “when yin calms and yang is solid, the spirit is cured”. TCM believes that the cause of PNPD is the yin-yang imbalance of qi and blood, followed by the generation of pathological products. To treat the disease, it is not only necessary to improve the symptoms of the patients, but to treat the symptoms if it is urgent, while also to seek the root cause(s) of the disease through the syndrome differentiation of the six channels or the organs, and to treat the cause if it’s chronic.

Second, unique ingenuity. The characteristic of TCM is that it can treat the same disease with different treatment methods. Based on many years of clinical experience, physicians can "observe the pulse of the syndrome, know what is wrong, and treat it according to the syndrome." Professor Wu Shentao[4] on the characteristics of medicines used in syndrome differentiation and treatment: Chuanwu and Caowu should be used heavily for cold arthralgia; large doses of rehmannia glutinosa for yin deficiency arthralgia; insects such as earthworm and leech are used for stubborn arthritis.

2.2 Clinical Efficacy

Chinese decoction medicine is flexible in modification. The physicians’ combination of syndrome differentiation and experience is unique among other therapies, and the scope of application is throughout the whole course of the disease. Li Mei[5] selected 60 patients with PDPN, with the control group given oral mecobalamin tablets to improve neurotrophics and the treatment group was given Yiqi Jianpi Lishui decoction on the basis of the control group treatment. The results showed that the treatment group had reduced vascular endothelium damage, and sped-up nerve conduction which relieved pain.

3 TCM Fumigation

TCM fumigation is the easiest viable treatment method; it also plays a good auxiliary role.

3.1 Treatment Characteristics

First, painless and non-invasive. TCM fumigation is painless, non-invasive, and has high patient compliance. Fumigation is a special external treatment method of TCM. The Chinese medicine is decocted and then fumigated to make the active ingredients in the medicine enter the body from the skin and exert their effects.

Second, no side effects. TCM fumigation can reduce the pain and side-effects of oral drugs for patients. As a method of external application, TCM fumigation does not undergo gastrointestinal, liver and kidney metabolism. By stimulating the patient’s nerves, blood circulation is improved.

3.2 Clinical Efficacy

TCM fumigation is simple to handle for patients and has better continuity. It can also be used as an adjuvant therapy or used alone to consolidate prevention or remission. Applicable to: patients with adverse reactions caused by the use of drugs; patients with poor efficacy in long-term use of drugs; patients who refuse to take Chinese and Western medicines; patients who are resistant to acupuncture. In these cases, it is more appropriate to choose traditional Chinese medicine fumigation treatment. Zhang Ying[6] selected 64 patients with painful diabetic neuropathy, the control group received conventional treatment, and the treatment group was treated with additional TCM foot bath for replenishing qi, activating blood, stopping numbness and pain relief on the basis of conventional treatment and nursing.

The results showed that: The TCM foot bath therapy can significantly improve the clinical efficacy on painful diabetic neuropathy.

4 Acupuncture Therapy

As the quintessence of TCM, acupuncture has a long history and established development. It has unique advantages in the treatment of many diseases. Many physicians believe that PNPD belongs to the category of collateral disease (luobing). The term "collateral disease" first appeared in "Suwen•Miu Ci Lun". Pain is the most common symptom, and acupuncture is the conventional treatment for this type of disease.

4.1 Treatment Characteristics

First, safe and non-toxic. Acupuncture is a non-drug treatment, which reduces the damage to the body by drugs, and has good patient compliance. It is currently the most widely applicable type of TCM treatment.

Second, economical and sterile. The earliest prototype of acupuncture and moxibustion was Bianstone, and has now developed into silver needles and stainless steel needles. Currently, most clinical needles are disposable stainless steel needles, which avoid cross-infection, and the cost is more economical than oral medicine.

4.2 Clinical Efficiency

Acupuncture has a faster effect on pain, and is the first choice for patients with recurrent attacks and severe pain. It is suitable for patients with acute pain of the disease; those who are find Chinese decoction hard to swallow, those who refuse to take Chinese medicine; those who suffer from serious illness and whose liver and kidney function cannot metabolize drugs. Chi Yanru[7] compared the psychological counseling group, the drug group, and the acupuncture group and found that the treatment effect of PDPN patients in the acupuncture group was the most significant. 95% of the patients had markedly reduced pathological conditions and the progress of the disease was curbed.

5 Combination Therapy

In addition to the above three therapies, other therapies include: Chinese medicine smearing, electroacupuncture, moxibustion and suction-cupping, traditional Chinese medicine application, and traditional exercises, etc. These methods have the characteristics of traditional Chinese medicine, and the combined clinical application of multiple therapies will not only enhance the efficacy, but also complement each other. He Peiwen[8] proved through clinical trials that electroacupuncture combined plus infrared radiation combined with Huangqi Guizhi Wuwu Decoction can relieve pain and improve nerve conduction function in the treatment of PDPN.

6 Conclusion

In conclusion, TCM does not adhere to a fixed model for the treatment of PNPD, and must not be generalized. The treatment should be based on syndrome differentiation, and the combination of body differentiation, disease differentiation and syndrome differentiation should be achieved to realize the individualization of TCM treatment schemes. In clinical practice, doctors choose one or more therapies according to the characteristics of the treatment method, the scope of application, and the patient's conditions to let Chinese medicine fully exert its effects, so that the patient's pain can be relieved as soon as possible with half the effort.

Although the advantages of TCM in the treatment of the disease are prominent and the efficacy is widely praised, it lacks evidence-based clinical evidences compared with Western medicine. Further evidence-based medical research is needed to provide a more scientific basis for TCM treatment of the disease.

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Journal of Clinical and Nursing Research

Research Article

Research Progress of TCM Treatment of Uterine Fibroids

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Abstract: Uterine fibroids are the most common benign tumors in gynecology. Traditional Chinese medicine treats uterine fibroids according to syndrome differentiation and treatment. The treatment of uterine fibroids has the characteristics of definitive curative effects and minor side-effects, but there are also many shortcomings, which require more in-depth research and exploration.

Keywords: Traditional Chinese medicine; Uterine fibroids; Research progress

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

Uterine fibroids are one of the most common benign tumors of the female reproductive system, and they belong to the categories of "Zheng Jia" and "Shi Jia" in Chinese medicine. The incidence in women of childbearing age can reach more than 20%, and it is common in 30-40 years old, and the high incidence period is 40-50 years old[1]. The main clinical manifestations include abdominal masses, compression, menstruation and abnormalities in the lower abdomen, which seriously endanger women's life and health. Judging from the current treatment methods, surgical removal of fibroids is the main clinical practice. For patients with excessive fibroids and multiple fibroids, the uterus may even be removed[2], which greatly increases the suffering of patients. Therefore, the advantages of traditional Chinese medicine are gradually emerging. It can not only shrink tumors, but also treat people dialectically with fewer side effects. This paper summarizes and analyzes the research progress of Chinese medicine in the treatment of uterine fibroids. Zhai Chunjie et al.[11] believe that although uterine fibroids are caused by "blood stasis", it is not the only cause, and phlegm evil often plays a role in the pathogenesis too.

2 Pathogenesis and Pathology

As recorded in the ancient books, it was believed that the illness is mostly caused by the lack of normal qi and dysfunction of the viscera due to poor emotions and unregulated diet. It then forms pathological products such as qi stagnation, blood stasis, phlegm dampness, and damp heat etc., which accumulate in the abdomen and form lumps. Among them, blood stasis is the main cause and pathogenesis. Many modern doctors generally believe that uterine fibroids are closely related to the disorder of qi and blood, and blood stasis is often present throughout the disease, because "no fibroids will form without blood stasis"[3]. Zhao Wenfang et al.[4] believe that the main pathogenesis of uterine fibroids is stagnation of qi and blood stasis, which can also lead to abnormal menstruation. You Zhaoling[5] believes that the main pathogenesis of uterine fibroids is lack of normal qi and accumulation of evil energy; and the accumulation of evils damages the normal qi, and blood stasis form due to deficiency of qi, resulting in accumulation of lumps in the abdomen. Yang Feng[6] believes that the occurrence of uterine fibroids is caused by internal dysfunction of the liver, spleen and kidneys, and external causes of "cold qi" residing at the vagina (zi men), blood stasis and coagulation, and

long-term accumulation of heat combine with internal dampness, causing blood stasis to stay put and grow larger day by day, resulting in this illness.

3 Syndrome Differentiation and Treatment

3.1 Qi Stagnation and Blood Stasis Type

Zhang Bo[7] used Shugan Sanjie Decoction to treat 52 patients with this syndrome. The control group was treated with mifepristone, and the experimental group was treated with Shugan Sanjie Decoction on the basis of mifepristone. Results: After treatment, the fibroids volume, hemoglobin and progesterone of the experimental group were significantly better than those of the control group, and the difference was statistically significant ($P< 0.05$). Shugan Sanjie Decoction can effectively reduce the volume of fibroids, lower the level of progesterone, improve clinical efficacy, and promote patient recovery. Zhao Yuling[8] used Fuliu Pingxiaozheng Decoction to treat 80 cases of patients with this syndrome, gave the control group Guizhi Fuling Capsule, and the experimental group Fuliu Pingxiaozheng Decoction. Results: Before treatment, there was no significant difference in the size of fibroids measured by ultrasound between the two groups. After treatment, the tumors of the experimental group were significantly smaller than those of the control group. The total treatment efficiency in the experimental group was 95.00%, which was significantly higher than that of the reference group (80.00%). It can be seen that Fuliu Pingxiaozheng Decoction has a more significant therapeutic effect, which can effectively inhibit the growth of uterine fibroids and is worthy of clinical promotion.

3.2 Qi Deficiency and Blood Stasis Type

Wang Yan et al.[9] used Xiaoliu Fang to treat 146 patients with qi deficiency and blood stasis, and gave the control group Guizhi Fuling capsule treatment, and the experimental group Xiaoliu Fang treatment. Results: The total treatment efficiency in the experimental group was 95.89%, which was significantly higher than the 84.3% in the control group. Xiaoliu Decoction was effective in treating uterine fibroids of qi deficiency and blood stasis, which could effectively shrink the tumor and relieve menstrual disorders. Li Xiaohua et al.[10] used Yiqi Huayu Decoction to treat 60 patients with this syndrome, gave the control group Guizhi Fuling Capsule, and the experimental group Yiqi Huayu Decoction. Results: The experimental group was better than the control group ($P<0.05$) in terms of menstrual condition (menstrual period and volume) and TCM syndrome improvement. Yiqi Huayu Recipe can relieve clinical symptoms, shrink tumors, and help relieve menstrual disorders.

3.3 Phlegm and Stasis Type

Zhang Qinshu et al.[11] used Xia's Xiaozheng Decoction to treat 50 patients with this syndrome, treated the control group with mifepristone and the experimental group with Xia's Xiaozheng Decoction. Results: The total treatment efficiency of the experimental group was 87.50%, which was significantly higher than 76.00% of the control group. Xia's Xiaozheng Decoction could inhibit the growth of uterine fibroids and reduce the volume of fibroids. Cao Qiaochun[12] used Baixiaoyi Decoction to treat 96 patients with this syndrome. The control group was treated with mifepristone, and the experimental group was treated with Baixiaoyi Decoction on the basis of mifepristone. Results: The total treatment efficiency on clinical symptoms in the experimental group was 93.75%, which was significantly higher than 77.08% in the control group; in terms of recurrence rate, the experimental group was 4.17%, which was significantly lower than 20.83% in the control group. The differences between the groups were statistically significant ($P<0.05$). Modified Baixiaoyi Decoction combined with mifepristone has good clinical effects in the treatment of phlegm and blood stasis type uterine fibroids, and at the same time can reduce the risk of recurrence.

3.4 Damp Heat Stasis Type

Wang Fangfang[13] used Xiaoji Granules to treat 58 patients with this syndrome of uterine fibroids. The control group was given Gongliuxiao treatment and the experimental group was given Xiaoji granules. Results: The total treatment efficiency of the experimental group was 87%, which was higher than that of the control group (63%). There was a significant difference in the total treatment efficiency between the two groups ($P<0.05$). Xiaoji Granules have definitive effects in reducing fibroids, improving menstrual flow, and relieving dysmenorrhea.

4 Conclusions

TCM diagnosis and treatment of diseases is characterized by overall syndrome differentiation and treatment, with unique advantages in the treatment of uterine fibroids. It can not only effectively relieve the clinical symptoms of patients, but also reduce the volume of fibroids, so that some patients can avoid surgical pain. In addition, traditional Chinese medicine has the advantages of long-lasting efficacy, high efficiency, and few adverse reactions. It has a relatively broad development prospect in combination with Western medicine and is worthy of further exploration. However, traditional Chinese medicine also has many shortcomings in the treatment of uterine fibroids, including inconsistent syndrome differentiation, large differences in medications, lack of standards for efficacy and a widely recognized efficacy assessment standard, and non-standard clinical research in terms of planning design and inclusion standards. The data analysis is simplistic and not objective; the clinical design lacks long-term follow-up results, and the lack of large-sample clinical research etc. Therefore, it is necessary to conduct more in-depth research and exploration to enable us to have a more comprehensive understanding and knowledge of uterine fibroids, to inform patients of early detection and early treatment, pay attention to life and mental adjustments, which will help in preventing and treating this disease. Under the guidance of TCM theory, we should use modern scientific research methods to improve the scientificity and reliability of TCM treatment of uterine fibroids, explore more deeply on the mechanisms of TCM treatment effects, and provide patients with choices of more diverse treatment methods.

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Journal of Clinical and Nursing Research

Research Article

Investigation of Cognition Status of Menopausal Hormone Therapy in Medical Institutions Staff

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Abstract: ***Objective:*** To investigate the cognition, application and commendation of menopausal hormone therapy (MHT) among medical institution staff with different professional background. ***Methods:*** Female staff aged 40-60 years in 4 tertiary hospitals were randomly selected. The participants' characteristics and the information of cognition, application and recommendation of MHT were collected by questionnaire. ***Results:*** A total of 341 people participated in this study, the cognition rate of MHT was 37% and the recommendation rate was 44%. For people with indications of MHT, the utilization rate is 15%, and 84.6% of them have used MHT for less than 3 years. 84.6% of those who did not use MHT considered menopause is not a disease and there was no need to use medication. Compared with nurses, doctors know more about MHT ($P<0.01$), and MHT recommendation rate of doctors was higher than that of nurses ($P<0.01$). The cognition of MHT were analyzed in menopause group, irregular menstruation group and regular menstruation group, there was no difference was found among these three groups ($P>0.05$). ***Conclusion:*** Strengthening the training of MHT related knowledge in medical institutions, will be helpful to improve the cognition and utilization rate of medical institutions and promote the whole society to study and use MHT.

Key words: Medical institution; Menopausal hormone therapy; Cognition; Application

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

The life span of human beings have been significantly prolonged, menopausal transition and postmenopausal period have become the longest period in female life cycle[1-2]. During this period, ovarian function has declined, a variety of degenerative diseases occurred in the body with estrogen level drops, these changes affects on the health and life quality of middle-aged and elderly women seriously. Proper application of menopausal hormone therapy (MHT) can effectively relieve symptoms related to menopause, and early application of MHT can also prevent the occurrence of chronic diseases in the elderly women[3-4], and improve the quality of life of middle-aged and elderly women. The use of MHT usually advocated by medical staff, whose cognition of MHT directly determines the application of MHT. This investigation aimed to figured out the cognition of MHT among medical institution staff with different professional background and improve the application of MHT.

2 Methods

The survey was conducted between January to June 2019 in 4 tertiary medical institutions of Dezhou city. Eligible participants were randomly selected, 40-60 years of age, including doctors, nurses, medical technicians and administrative logistics personnel. Written informed consents were obtained from all participants. Exclusion criteria: iatrogenic menopause; women with contraindications to use menopausal hormones.

A questionnaire designed by professional group was used in this study, and the investigators who received specialized training instructed the participant

to fill the questionnaire one-to-one and face-to-face. Details of the questionnaire covered age, professional qualifications, educational background, major, height, weight, menstrual status, intrauterine device, chronic diseases, surgical history and family history (gynecological cancer); the awareness and utilization of MHT, the understanding of MHT advantages, such as to relieve vasomotor symptoms[5], prevent osteoporosis[4] and cardiovascular diseases[6-8], and solve problems related to urinary and reproductive tract atrophy[9-11]; whether to use, reasons for using or not; whether recommended to others.

3 Statistical analysis

Staff in medical institutions were divided into doctors group (for group 1), nurses group (for groip 2), medical technicians group (for group 3), and administrative staff group (for group 4). According to the menstrual conditions, the participants were divided into menopause group, irregular menstruation group and regular menstruation group [12]. Amenorrhea for more than 1 year was considered as menopause. If menstrual cycles changed more than 7 days adjacently and this phenomenon occurred more than two times within 10 months, it is regarded as irregular menstruation. Those with a normal menstrual cycle were considered as regular menstruation.

All data were analyzed using SPSS software version 23.0, and the comparisons were performed by chi-squared Test. When $P<0.05$, the difference was considered statistically significant.

4 Results

Among 354 eligible women, 341 gave their questionnaires back. Analysis was performed on these 341 women with complete data. The average age of respondents was 48.43±5.143, there were 80 doctors (23.4%) ,148 nurses (43.4%), 35 medical technicians (10.3%) and 78 administrative logistics personnel (22.9%).

For these 341 women, the total understanding rate of MHT was 36.95%. In doctors group, the understanding rate of MHT was 58.75%, much higher than nurses group (29.73%) and medical technicians group (20.00%). The total understanding rate of vasomotor symptoms was 41.35%, the rate of doctors group was higher than that of nursers group (61.25% VS 33.31%). The total understanding rate of preventing osteoporosis was 44.28%, the rate of doctors group was the highest (67.50%) compared with nursers group(33.78%) and administrative logistics personnel (42.31%). The total understanding rate of preventing cardiovascular diseases was 40.76%, doctors group was higher than nursers group (61.25% VS 33.11%). 37.83% women knew the MHT could solve problems related to urinary and reproductive tract atrophy, the rate of doctors group was also the highest (63.75%) compared with nursers group, medical technicians group and administrative logistics personnel (29.73%, 28.57%, 30.77%). We analyzed the recommended rate of MHT, both doctors group (61.25%) and administrative logistics personnel (58.97%) were higher than nursers group (27.70%). The results were showed in Table 1.

Table 1. Prevalence of cognition of MHT, awareness of the benefits of MHT and the recommended rate

	Group 1 (doctor, *n*=80)	Group 2 (nurse, *n*=148)	Group 3 (medical technicians, *n*=35)	Group 4 (administrative logistics personnel, *n*=78)	Total (*n*=341)
Cognition of MHT(%)	58.75[a] vs. groups 2,3	29.73	20.00	35.90	36.95
Improve vasomotor symptoms(%)	61.25[a] vs. groups 2	33.11	34.29	39.74	41.35
Prevent osteoporosis(%)	67.50[a] vs. groups 2,4	33.78	40.00	42.31	44.28
Prevent cardiovascular disease(%)	61.25[a] vs. groups 2	33.11	34.29	37.18	40.76
Improve urogenital atrophy(%)	63.75[a] vs. groups 2,3,4	29.73	28.57	30.77	37.83
recommended rate(%)	61.25[a] vs. groups 2	27.70[a]vs. groups 4	40.00	58.97	43.99

Comparisons were performed by contingency tables and chi-squared test.

[a]$P<0.01$, stated group(s) statistically different from the reference group.

In our study, 118 women were postmenopausal, accounting for 34.6% of the total number, the average age was (48.63±3.90). 55 women's periods were irregular, accounting for 16.1%. 168 women have regular menstrual cycles (49.3%). Considered the understanding rate of MHT advantages, such as to relieve vasomotor symptoms, prevent osteoporosis and cardiovascular diseases, and solve problems

related to urinary and reproductive tract atrophy, no significant difference was found among menopause group, irregular menstruation group and regular menstruation group (P>0.05). The 173 women with menopause and irregular menstruation had indications for treatment of MHT, only 26 (15.0%) received MHT, including 11 doctors, 3 nurses, 3 medical technicians and 9 administrative logistics personnel, and MHT utilization was less than 3 years in 84.6 patients (22/26), among these 22 people, 10 patients (45.5%) had remission of symptoms, there was no need to take the drug anymore, for the other 12 patients (54.5%), they feared of adverse reactions, and dare not to use for long time. According to our study, 147 females in medical institutions who had indications didn't received MHT, most of them (94/147) considered that there is no necessary to accept medication, in their view, menopause was not disease(Table 2).

Table 2. Utilization of MHT in medical institutions staff [*n* (%)]

Group	*n* (%)
Menses	
pausimenia	118(34.6)
irregular menstruation	55(16.1)
regular menstruation	168(49.3)
Whether (or not) to use MHT	
Yes	26(15.0)
No	147(85.0)
Undergoing MHT	
<3 months	5(19.2)
3-6 months	4(15.4)
6-12 months	6(23.1)
1-3 years	7(26.9)
>3years	4(15.4)
MHT withdrawal	
cure	10(45.5)
feared of adverse reactions	12(54.5)
Why not to use MHT	
menopause was not disease, medication was not necessary	94(63.9)
wanted to use，feared of adverse reactions	27(18.4)
didn’t know MHT	26(17.7)

5 Discussion

It has been reported that nearly 3/4 of perimenopausal women suffer from hot flashes, night sweats and other symptoms, which can last from moderate to severe for 10 years or more and seriously affect the quality of life[13]. Meanwhile, menopausal symptoms without medical intervention are also associated with high medical expenses and reduced work efficiency[13]. MHT has played roles in various diseases caused by ovarian failure, and contributed to relieve vasomotor symptoms, prevent osteoporosis and cardiovascular disease, improve urogenital tract atrophy. In China, the incidence of menopausal symptoms reached up to 60%-70%[14], and only 13.60%-29.98% of women knew about MHT[15]. Our survey found that the cognition rate of MHT among medical institution staff was only 37%, MHT could relieve pausimenia symptoms, but only 37.8%-44.3% were awareness of this, which indicating that the understanding and knowledge of menopause in medical institution staff were insufficient. Differences of cognition rate existed in people with different professionals, the cognition rate of doctors on MHT was higher than that of nurses and medical technicians.

The utilization rate of MHT in developed countries has reached 18%-50%[2], A survey among German obstetricians and gynecologists published in 2012 revealed that up to 97% of them would use MHT themselves or give MHT to their partners[16]. A survey in Italy revealed hormone therapy was used by 37% postmenopausal women doctors and 39% male doctors' wives, and 64% postmenopausal women doctors and 58% male doctors' wives were under the hormone therapy[17]. Taking the acceptance and utilization of MHT into account, Chinese women is far from that of advanced countries, such as Europe and the United States. According to the data of

Tianjin, the utilization rate of MHT was less than 9.62%[18]. This phenomenon reflected that health care knowledge of Chinese perimenopausal women was exparte, unstandardized, and weak[19]. In our survey, it was also found that the utilization rate of MHT in medical institutions was only 15.0%, and 84.6% of them used MHT for less than 3 years, in their consideration, medication was not required after the symptoms have subsided, and a number of them showed worry about drug side effects. 84.6% of those without MHT believed that the problems related to menopause were not diseases and medication was unnecessary. this conclusion kept consistent with the fact that other studies revealed, that perimenopausal women urgently need to acquire perimenopausal knowledge with a particularly strong demand for health care. The cognition rate of MHT among medical institution staff was 37% and the using rate was only 15.0%, but 44% of them, especially doctors, would like to recommend MHT to others.

In conclusion, the knowledge of MHT in medical institution personnel have been confirmed insufficient and the awareness of health care was very weak. It is urgently required that systematic and standardized training should be conducted for medical institution staff. Administrative staff as a nonmedical background group, had higher utilization rate and recommendation rate of MHT than that of nurses, suggested general population trust the opinions of the professionals, and would like to spread professional points. The training of MHT knowledge in medical institutions should be strengthen, only in this way can we improve the cognition and utilization rate of MHT, promote the application widely.

6 Compliance with ethical standards

Conflict of interest: The authors have no conflicts of interest.

Ethical approval: This study was approved by the Ethics Review Board of Maternity & Child Care Center of Dezhou, Shandong (approval number, DFYKY-2018020). All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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Journal of Clinical and Nursing Research

Research Article

On the Treatment of Kidney Fibrosis from the Theory of Internal Deficiency of Qi and the Coexistence of Phlegm and Blood Stasis

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Abstract: Traditional Chinese medicine believes that the etiology and pathogenesis of renal fibrosis are characterized by deficiency of the lung, spleen and kidney, and phlegm, blood stasis, dampness and poison. The positive and the evil can influence each other and cause and effect each other, forming the pathological characteristics of the deficiency, the deficiency, the deficiency and the reality. Chinese medicine treatment of the disease has its unique advantages, external and internal injury equal emphasis, correction and dispelling evil and regulation. From the point of view of "deficiency of qi and coexistence of phlegm and blood stasis", the treatment of renal fibrosis can provide theoretical basis for the treatment of the disease.

Keywords: Renal fibrosis; Deficiency of qi; Coexistence of phlegm and blood stasis; Pathogenesis

Publication date: January, 2021
Publication online: 31 January, 2021
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of nephropathy

Renal fibrosis (RIF) is the ultimate way in which all chronic kidney diseases progress to end-stage kidney disease[1]. The etiology is complicated, the pathogenesis is not completely clear, and modern medicine lacks effective treatment. Renal fibrosis belongs to the categories of "kidney labor", "edema", "obstruction", "Guan GE", "drowning poison" and so on. Its pathogenesis is characterized by deficiency of spleen and kidney, deficiency of spleen and kidney, phlegm, dampness, blood stasis, poison, dampness, blood stasis and poison are formed on the basis of deficiency and blood stasis. The positive deficiency and the evil reality can influence each other and cause and effect each other, forming the pathological characteristics of Yin deficiency, deficiency, deficiency and reality[2]. Renal fibrosis is a refractory disease in renal diseases, and traditional Chinese medicine has a unique advantage in the treatment of this disease. In order to provide theoretical basis for the treatment of renal fibrosis, this paper discusses the pathogenesis of renal fibrosis.

1 "Deficiency" as the basis, throughout the disease is the key to pathogenesis

"Su-Quan comment on the theory of heat and disease" said:" evil, its Qi will be empty." For the occurrence and development of many diseases, the main reason is deficiency. If the human body is full of qi and the outside is dense, the disease is not easy to invade and the disease cannot occur. That is, "good memory, evil cannot do". On the contrary, if the human body is insufficient, weak resistance to evil, disease and evil into the cause of disease. Therefore, the occurrence of disease is due to deficiency of qi, inability to resist the invasion of external evil or evil from endogenous. According to the whole concept of TCM, the deficiency of human body can be divided into the deficiency of the whole, the deficiency of the part and the deficiency of the moment[3].

The deficiency of the whole body is the deficiency of qi, the function of multiple systems of the whole body is decreased, the deficiency of qi is insufficient,

the evil poison invades the kidney, the long-term evil obstructs the kidney collaterals, the blood stagnation is blood stasis, the deficiency blood stasis affects each other," all qi is long sick, blood should also be sick, follow the thread of self-bi".

The deficiency of part refers to the insufficiency of the function of the body part, single system or organ, and the human body is an indivisible and interrelated whole, and the deficiency of part can lead to the deficiency of the whole day by day. The deficiency of renal fibrosis mainly lies in deficiency of spleen and kidney. Kidney is water dirty, if kidney deficiency, transpiration gasification weak, resulting in unfavorable urination, so that creatinine, urinary urea nitrogen stay, brewed wet turbidity." Qi deficiency, cannot reach the blood vessels, blood vessels without qi, will stay for blood stasis", spleen and stomach for the source of qi and blood biochemistry, qi and blood deficiency can make qi deficiency, blood stasis aggravated. Kidney fibrosis, deficiency and evil are causality, deficiency of qi makes turbid evil lie in the body, turbid evil does not change, consume qi, eventually lead to the decline of yin and yang, develop into uremia.

"All diseases are born in Qi, anger is on Qi, joy is on Qi, sorrow is on Qi, fear is under Qi ...", mental activity affects the normal or not of qi, in addition, because diet is the source of qi biochemistry, diet is not good, nutrition will naturally lead to low qi.

2 Blood stasis and phlegm turbid, mutual knot as the standard

TCM believes that phlegm and blood stasis are the pathological products of the body[4] Xu Shen, "Shuo Wen Jie Zi "said :" Blood stasis, blood accumulation is also ." Blood stasis is that the blood from the meridian can not be discharged or dissipated in time, because the movement of qi and blood is blocked, or the blood flow of qi deficiency is not smooth, or phlegm is left in the body, forming stasis accumulation; phlegm is mostly due to the dysfunction of viscera and body fluid. Blood stasis is closely related to the theory of collaterals. The essence of collateral disease is that the blood flow of collaterals is not smooth and the choroid block belongs to the category of blood stasis. Ye Tianshi said:" long illness will cure the collaterals, said that the disease long qi and blood to promote unfavorable, blood collaterals must have stasis coagulation ", kidney collaterals stasis is due to deficiency of qi caused by dampness turbidity, blood stasis in the collaterals, left but not left lesions, is the deficiency of qi as the starting point, with evil qi stagnation as the end of the pathological changes.

3 Syndrome

At present, the treatment of renal fibrosis by western medicine is not only active in the treatment of primary diseases, but also by strictly controlling secondary factors and avoiding acute and chronic aggravating factors to prevent fibrosis, but the curative effect is not satisfactory. Recently, the mechanism and efficacy of new anti-fibrosis methods and techniques with cytokines and fibroblasts as the main therapeutic targets are not completely clear. Traditional Chinese medicine or integrated Chinese and western medicine to prevent and cure this disease has certain value, the treatment can achieve the external feeling and the internal injury equal emphasis, the correction and dispels the evil coexistence. Prof Ho Li-qun[5] believed that chronic kidney fibrosis is the cause of chronic kidney fibrosis. Therefore, to promote blood circulation and remove blood stasis, tonifying the kidney and collaterals as the criteria for diagnosis and treatment, advocate anti-fiber Ling Fang. Shen Hui[6] According to the theory of "virtual labor and construction of the middle", the creation of Jianzhong Li Lao Tang, the foundation of the day after tomorrow, Jianzhong Qi, virtual reality and elimination. Cheng Cheng[7] believed that the treatment of renal fibrosis should pay attention to the three-coke, regulate the qi machine, take into account the entry and exit of the surface, open the pivot up and down, and make the evil such as phlegm, dampness and blood stasis have a way out. It opens up a new idea for the treatment of renal fibrosis.

In the process of disease, phlegm dampness, blood stasis, evil poison are closely related, cause and effect each other, forming the complex pathogenesis of deficiency and reality. Therefore, the clinical treatment of renal fibrosis pays attention to the whole, according to the specific types of disease differentiation. Spleen and kidney deficiency failure type kidney fibrosis, should invigorate qi and invigorate spleen, tonify kidney and help yang, commonly used astragalus, gynostemma pentaphyllum, Rhodiola, Rehmannia,

etc.; blood stasis blocking collaterals should be the method of activating blood circulation to remove blood stasis and collaterals, commonly used Panax notoginseng, ghost arrow rain, Chuanxiong, Salvia miltiorrhiza, safflower, Dilong, silkworm, etc.; dampness and poison overflow when dampness detoxification, commonly used asiatic grass, alisma, Poria cocos, earth, rhubarb, Tripterygium wilfordii, etc.; Qi deficiency and blood stasis type, mixed with deficiency, is the main aspect of its lesions. Kidney deficiency syndrome or Qi deficiency, or Yin deficiency, or Qi Yin deficiency, so should be combined with the method of tonifying qi, nourishing Yin treatment, clinical should be added and subtracted with the syndrome.

4 Summary

The pathogenesis of kidney maintenance belongs to this deficiency, spleen and kidney qi deficiency and yang deficiency belong to this deficiency, phlegm, turbid blood stasis and blood stasis belong to standard, positive deficiency and evil affect each other. Renal fibrosis is a refractory disease in renal diseases. Chinese medicine has a unique advantage in the treatment of this disease. At the same time, as Chinese traditional medicine, there are still a lot of contents to be further explored.

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Journal of Clinical and Nursing Research

Research Article

Treatment of Sjogren's Syndrome with Liver Depression

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Abstract: Liu Chunying is a famous old Chinese medicine doctor for more than 30 years. He has rich experience in the understanding and treatment of Sjogren's syndrome (SS). Liu Shi systematically discusses the etiology and pathogenesis of SS from the angle of liver depression. In the treatment, it is emphasized that "Muyu Da Zhi" is the first, with the addition and subtraction of the disease, to provide a new idea for the treatment of Sjogren's syndrome from liver depression, and to attach a test case.

Keywords: Sjogren's syndrome; Liver depression caused dryness; Syndrome differentiation; Muyu Da Zhi; Liu Chunying; Famous medical experience

Publication date: January, 2021
Publication online: 31 January, 2021
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Sjogren's syndrome (sjogren's syndrome, SS) is a kind of diffuse connective tissue disease. The prevalence of chronic inflammatory autoimmune disease is 0.29%~0.77%, and the ratio of male to female is 1:9[1] A series of dry symptoms, such as dry mouth, dry eyes, dry skin, etc., often appear clinically. SS pathogenesis is not clear in modern medicine, and it is related to many factors, such as immune heredity, virus infection, immune abnormality and apoptosis[2] Treatment, Western medicine use more glucocorticoid and immunosuppressant treatment, although to some extent can control the disease, but prone to repeated attacks. Chinese medicine has unique advantages in the treatment of this disease.

1 Analysis of SS Causes and Pathogenesis of Liver Depression

According to SS clinical manifestations, TCM attributed it to dryness syndrome and dryness arthralgia. About its argument lawsuit is first found in Huangdi Neijing, such as Su-Quan. Yin and Yang should be like the big theory, said: "dry victory is dry";" Su asked. Five running big theory:" dryness to dry "can see dryness evil pathogenicity, often lead to the body qi and blood body fluid insufficiency, outside can not nourish the skin nine orifices, inside can not reach the viscera and appear a series of dry image. Liu Shi believes that the development of Sjogren's syndrome is an important internal factor is liver depression. Liver depression caused dryness is mainly manifested in two aspects, on the one hand, the liver is the main drain, can be distributed qi and blood body fluid nourishing the whole body ," blood syndrome theory": "wood is the main catharsis, eating qi into the stomach, all rely on liver wood qi to drain, then water valley is "; liver depression can directly lead to liver drainage function is inhibited, and then the whole body qi, blood and body fluid transport disorders, external responsibility for skin, hair, nine lost moisturizing, internal and joint, muscles and bones lost nourishment, severe viscera can also appear pathological changes. On the other hand: the liver hides blood, can store blood, also main distributes the whole body blood flow, if the blood flow distributes normally, the human body each viscera tissue organ, the vein and so on can obtain the nourishment; the other person because of the body

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blood homology, if the blood deficiency or the blood stasis may affect the body fluid application, the body blood deficiency then dryness elephant four. This is "dryness for the withered blood also "; second, liver storage long and do not flow, long depression and not understand, but also lead to blood stasis, blood stasis is impassable, irregular vein is not smooth, water fluid is difficult to transport moisturizing the orifices, can also cause dryness.

2 Principles of treatment

Liver depression must first relieve depression, and pay attention to the treatment of liver depression. Fei Boxiong "medical prescription theory" mentioned:" Mu Yuda Zhi ", so in clinical syndrome differentiation treatment, Liu Shi advocated that liver stagnation and dryness should be based on soothing the liver and regulating qi as the general treatment principle, clinical use of commonly used drugs such as: Bupleurum, tulip, Buddha hand, Perilla, Trichosanthes, Magnolia officinalis, black medicine. Liu Shi in the relief of liver depression is especially good with incense, incense to the liver, Sanjiao Jing, good at the stagnation of liver-qi, but also dredge the three-char Qi machine. On the other hand, Liu stressed the use of "Da Zhi" method to treat the syndrome of liver depression. "Medical Guan" said:" to one side of the wood depression, and all depression, free and loose is also." During the treatment of SS, Liu Shi took Xiaoyao Powder as the general treatment prescription, soothing the liver and relieving depression as the general treatment rule. According to the syndrome differentiation of liver depression, many methods of "reaching it" were used, the clinical effect was obvious and the prognosis was good. Also pay attention to the psychological guidance of patients, with traditional Chinese medicine emotional therapy as an auxiliary means.

3 Clinical syndrome differentiation

3.1 Liver stagnation and qi stagnation

Liu Shi believes that liver depression and qi stagnation can be understood as emotional depression, liver disadjustment, catharsis disorder, Qi block, water and fluid distribution disorder, then the orifices lose nourishment. Traditional Chinese medicine thinks that if the gas machine is smooth, the discharge of body fluid is normal, and if the gas machine is blocked, the formation, distribution and excretion of body fluid are affected. Chen Xiuyuan "Medicine is really easy" put forward:" water and gas homology do not have to divide", " Qi stagnation water is also stagnant, gas flow water also line "stagnation of water and liquid stagnation, repress Jinbu, the body fur, body officials lost in nourishing, a series of dry image. Clinical often show chest flank or breast distended pain, more anxiety and good breath, dry eyes, sometimes astringent pain, dry mouth dry pharynx, women can appear irregular menstruation, tongue red less Tianjin, thin and dry fur, fine pulse string. Treatment is mainly to soothe the liver and regulate qi, the main prescriptions are Xiaoyao Powder, Chaihu Shugan Powder, Liuyu decoction and so on.

3.2 Liver depression and fire

Kim. Liu Wansu put forward the viewpoint of "six Qi from cremation", and Zhu Danxi put forward the academic viewpoint that" Qi is more than fire". Liu Shi believes that plain mood is not smooth, liver qi is easy to stagnation, liver depression for a long time to turn fire, hot gas consumption injury body fluid, resulting in exhaustion of body fluid dryness. Clinical manifestations are irritability, insomnia and dreams, headache and dizziness, dry mouth, bitter pharynx, dry eyes, big constipation, tongue red fur yellow dryness, pulse string number. Therefore, can be cast Dan Zhi Xiaoyao San or Gentian Xiegan decoction cut, to relieve fire depression and soothe the liver. If liver depression consumes blood for a long time, causes liver depression to consume blood, takes nourishing blood and invigorating spleen and soothing liver as the treatment principle, and uses Xiaoyao Powder and Gui Shao Dihuang decoction. Even if the liver depression turns fire, the initial consumption of liver blood, followed by injury of liver yin, resulting in liver stagnation and injury of yin, to nourish yin and nourish blood, soothe the liver and clear the deficiency of heat as the principle, can be added and subtracted with Zishui Qinggan Yin and Xiaoyao San.

3.3 Liver stagnation and spleen deficiency

According to the holistic view of traditional Chinese medicine and the theory of five elements, if the liver and spleen are ill, they can be transmitted to each other. "The synopsis of the Golden Chamber" said:" see the disease of the liver, know the liver

to spread the spleen ", if the patient's emotional failure, depression and injury to the liver, liver loss, Qi unobstructed, and then cross against the spleen, resulting in liver stagnation and spleen deficiency. Su-wen. On the other hand, spleen deficiency is biochemical deficiency, which is often manifested as emotional depression, chest tightness, fatigue, loose stools, loose stools, tooth marks, pulse strings or acculturation. Treatment commonly used Xiaoyao San and Sijunzi decoction, Chai Shao Liujunzi decoction cut.

3.4 Liver stasis

Gong Yanxian "Shou Shibao Yuan" put forward: "cover Qi, blood handsome also, Qi line is blood line "can see Qi machine usually, run strip reach, blood operation can be unobstructed; on the contrary, Qi and blood maintain each other, Qi disease must be blood, if liver depression leads to liver catharsis, Qi machine is not smooth, blood flow is blocked, resulting in liver stagnation and blood stasis. "Blood Syndrome Theory" said: "If there is blood stasis, then Qi for blood obstruction, not to rise, water because not to rise with Qi "blood stasis further aggravated Qi block, can not promote water to the whole body nourishing the viscera, skin, body nine orifices. Li Gui[4]It is also mentioned that liver depression can block meridians and veins after blood stasis is formed, and water can not be applied to moisten the orifices. Clinical often show anxiety and irritability, even depression, dark complexion, skin nail error, dry eyes, blurred vision, dry mouth and nose mucous membrane discomfort, dry mouth do not want to drink, hypochondriac pain and fixed, women menstrual irregular, treatment has soothing liver and relieving depression, regulating qi and stasis, prescription can be used Siwu Xiaoyao decoction, diaphragm under the decoction and so on.

4 Conclusion

As a common rheumatic immune disease in modern clinical practice, Sjogren's syndrome is not very perfect for SS research at present. Some western medicine treatments such as methotrexate, hydroxychloroquine, Elamod, glucocorticoid and other oral drugs have a large gastrointestinal reaction; some immunosuppressants are expensive for a long time and have no good solution. On the contrary, traditional Chinese medicine has unique advantages in the treatment of SS, Liu Chunying old Chinese medicine according to their own clinical experience, put forward from the liver depression as the core mechanism of the treatment of SS. disease In the treatment, Xiaoyao Powder as the general treatment prescription, soothing the liver and relieving depression and regulating qi as the general treatment principle and using many "Da Zhi" methods, the clinical treatment effect is very good and the prognosis is good.

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Journal of Clinical and Nursing Research

Research Article

Comparison of Laparotomy and Laparoscopic Surgery for Ectopic Pregnancy at High Altitude

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Funding: The Jilin project is supported by the "High-level Talent training Program" for graduate students of Tibet University, No. 2019YXYYJS024

Abstract: In this paper, by comparing the clinical effects of laparotomy and laparoscopy on the recovery of ectopic pregnancy, 70 patients with ectopic pregnancy in the people's Hospital of Tibet Autonomous region from April 2017 to April 2019 were selected as the control group who received laparotomy. 35 patients in each group were treated by laparoscopy to compare the recovery of the two groups. To solve the problem of which method of operation for ectopic pregnancy in plateau area is better, and to promote the operation for better recovery of patients in the future.

Key words: Laparoscopy; Laparotomy; Ectopic pregnancy

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

This area is located in the high-altitude area above 3000 m above sea level, and the oxygen content is lower than that in the plain. The most common ectopic pregnancies in our hospital are tubal pregnancy and vitiligo pregnancy. By comparing the results of laparotomy and laparoscopic surgery for ectopic pregnancy at high altitude, we can improve the self-protection consciousness of Tibetan women, make more families away from pain, and make sick women get better treatment. choose a more suitable way of operation, so that the quality of life and health level have been improved.

2 Materials and methods

2.1 Basic data

The age of the observation group was 20-45 years old, and the average age was (28.55 plus or 3.20). The average age of the control group was 22-44 years old, and the average age of the control group was (27.44 plus or minus 3.56). There was no significant difference in the general data between the two groups (P>0.05). They all lived in Tibet Autonomous region for a long time and can be compared.

2.2 Method

Operation method: the control group was treated with laparotomy, the patient was anesthetized, the incision from 5 to 8cm was taken from the lower abdomen of the patient, the pregnancy site was identified, the focus or fallopian tube was removed, the abdominal cavity and pelvic cavity were washed after operation, and the incision was closed.

The study group carried out the related treatment of laparoscopic surgery, anesthetized the patients, examined the fallopian tube and pelvic cavity, identified the pregnancy site of the fallopian tube, created an operating hole in the patient's lower abdomen, and then carried out related operations. Local electrocoagulation to stop bleeding to prevent too many injuries. After hemostasis, the pelvic cavity is explored to separate the sites containing adhesions. After operation, both groups were treated with antibiotics.

2.3 Statistical methods

With the help of SPSS25.0 software to study the

available data, the standard deviation plus average method ($\bar{x} \pm s$) is used to represent the measurement data, the t-test is used, the counting data rate is expressed as %, and the chi-square test is accepted. When $P < 0.05$, it is suggested that the difference in the data is statistically significant.

2.4 Observation indicators

The specific conditions of the two groups were compared.

3 Results

By comparison, the laparoscopy group is better than the laparotomy group (Table 1-2).

Table 1. Comparison of operation time, exhaust time, hospital stay, intraoperative blood loss and postoperative visits between the two groups

Group	*N*	Operation time (min)	Exhaust time (h)	Hospitalization time (d)	Intraoperative bleeding volume (ml)
Research group	35	80.35±3.23	35.22±2.45	5.30±0.65	120±3.55
Control group	35	120.33±2.33	55.30±2.30	7.55±0.45	260±2.22
P				<0.05	

Table 2. The incidence of adverse reactions was compared between the two groups

Group	*n*	Incision infection	Intestinal obstruction	Tubal patency rate
Research group	35	1	1	85.71 (30)
Control group	35	6	4	71.42 (25)
χ^2		3.97	1.94	2.12
P			<0.05	

4 Discussion

Laparoscopic surgery takes less time and less trauma, and patients recover more quickly after surgery, mainly because in the specific treatment of laparoscopy, only operating holes need to be created, no incisions are required, and the wound is smaller. it can promote further recovery after operation. And exploring the focus of laparoscopy can reduce the damage to nearby organs, further prevent the adverse effects of gauze, gloves, air and other factors, reduce the risk of abdominal adhesion and infection, and further reduce bleeding, reduce the difficulty of operation and shorten the time of operation. The operation time of the study group is about 80 minutes, which is significantly better than that of the control group (120 minutes). The shorter the operation time, the more conducive to postoperative recovery and avoid the occurrence of surgical complications. Exhaust time is also very important for patients. It can be judged whether there is intestinal obstruction. The postoperative hospital stay of the patients in the study group is less than that in the control group, which is beneficial to the family economy or the physical and mental health of the patients. The effect of laparoscopy is better than that of laparotomy, indicating that laparoscopic surgery brings less trauma and contributes to the recovery of patients after operation. Under the guidance of laparoscopy, the condition of abdominal cavity can be observed clearly and unnecessary injury can be reduced. With the maturity of laparoscopic technology, the updating and upgrading of endoscopic instruments and the improvement of minimally invasive surgery techniques of clinicians, the surgical methods of ectopic pregnancy can be inclined to laparoscopy. For Tibetan women, some pastoral women have a low level of education, do not know what is ectopic pregnancy, abdominal pain and vaginal bleeding do not care, the condition is serious when they come to the hospital. Some patients often have no obvious symptoms before abortion or rupture, but severe abdominal pain and vaginal bleeding eventually lead to fallopian tube rupture. Untimely treatment can endanger life and safety. The results show that laparoscopy has less trauma and less damage to the fallopian tubes of young women with fertility requirements, which is beneficial to re-pregnancy. Secondly, the infection rate of endoscopy is lower than that of laparotomy, and postoperative infection may cause pelvic inflammation and tubal adhesion, which is prone to re-ectopic pregnancy and affect re-pregnancy. Whether the incision infection is that patients and their families can directly feel the result of this operation is good or bad. if the wound infection will make the patient suffer another kind of torture besides ectopic pregnancy, the laparoscopic wound is small, this study laparoscopic infection is only one

person, based on the limited medical environment in the hospital, some patients cannot have a good rest, and recover quickly after operation. Going home as soon as possible can ensure the quality of life of the patients in order to facilitate the second pregnancy.

In the past, laparotomy was often used, when laparotomy, through looking directly at the lesion site, but the trauma was greater during laparotomy, and there was more bleeding during the operation. The patients with great impact on the body have slow postoperative recovery, long hospital stay and high risk of complications. In addition, the scope of operation during laparotomy is limited, and bleeding will affect the event horizon, resulting in poor resection of deep embryonic tissue and affecting the recanalization effect of fallopian tube. In addition, the surgical incision is larger during laparotomy, which is easy to form scar after operation, which affects beauty and patient satisfaction. Under the guidance of laparoscopy, the condition of abdominal cavity can be observed clearly and unnecessary injury can be reduced. Laparoscopic surgery is a new type of minimally invasive surgery. In recent years, laparoscopic technology has developed rapidly. In laparoscopic surgery, the TV picture magnifies the fallopian tube. It is beneficial to the progress of the operation. In postoperative nursing, we should pay attention to the psychological changes of patients. Some patients think that they are incomplete after surgery and feel that their pregnancy rate has dropped by 50%. The study found that the recanalization rate of fallopian tubes after laparoscopy in our hospital was 85.71%. The recanalization rate of fallopian tubes after laparotomy was 71.42%. It is more beneficial for patients to get pregnant again after operation. By comparing the advantages and disadvantages of surgical methods, we can better help patients to choose suitable surgical methods, which is beneficial to patients. In the future work, we should strengthen the health knowledge education of patients, popularize the knowledge of obstetrics and gynecology, and try to make Tibetan women change their sanitary conditions and medical consciousness in order to better protect women.

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Journal of Clinical and Nursing Research

Research Article

Analysis of the Effects of Perioperative Nursing Intervention for Patients with Cerebrovascular Intervention

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Abstract: ***Objective:*** To explore the clinical application effects of perioperative nursing intervention in the treatment of patients with cerebrovascular intervention. ***Methods:*** 176 patients with cerebrovascular intervention in our hospital from October 2018 to March 2020 were selected and randomly divided into 2 groups, with 88 cases in the control group and 88 cases in the observation group. Comparative analysis of blood pressure and incidence of complications was performed. ***Results:*** During the operation, the systolic blood pressure of the observation group increased by (11.85±1.66) mmHg, and the diastolic blood pressure was (4.63±0.45) mmHg. The control group patients' systolic blood pressure increased by (22.12±1.98) mmHg and the diastolic blood pressure was (8.36±3.69) mmHg, the two results were significantly different. The blood pressure of the patients in the control group fluctuated more; and the incidence of complications in the observation group is lower than that of the control group. The observation group's incidence of hematoma, low back discomfort, dysuria, and insomnia and dreaminess was 2.27%, 2.27%, 1.14%, 0%, respectively, with total incidence of 5.68%; in the control group, the incidence of hematoma, low back discomfort, dysuria, insomnia and dreaminess were 6.81%, 5.68%, 3.41%, 4.55% respectively, total incidence being 20.45%. The difference between observation group and control group is obvious. ***Conclusion:*** Through perioperative nursing intervention, the recovery speed of patients can be improved, and the incidence of postoperative complications can be reduced. The mental state of the patient before the operation was adjusted, the emotions were calmed, the patient's compliance was improved, and the patient's resistive emotions were reduced. At the same time, if patients can get good nursing care after surgery, the probability of postoperative complications is reduced, so that patients have better results in surgery, and its clinical application is worthy of promotion.

Keywords: Cerebrovascular patients; Perioperative nursing; Nursing effect

Publication date: January, 2021
Publication online: 31 January, 2021
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Cerebrovascular disease is the second most threatening disease to human health after malignant tumor disease, and its disability rate and mortality rate are higher. The treatment of cerebrovascular interventional surgery is systemic heparinization and interventional treatment using digital subtraction technology. One method is very effective in treating intracranial vascular stenosis and intracranial and extracranial artery plaques[1]. However, because the patient knows little about the disease and the operation, negative emotions may arise before and after the operation. On this basis, this paper started the research on the effects of postoperative nursing intervention for patients with cerebrovascular intervention, details as follow.

1 Information and Methods

1.1 General Information

176 cerebrovascular interventional patients in our

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hospital from October 2018 to March 2020 were selected and randomly divided into 2 groups, with 88 cases in the control group and 88 cases in the observation group. The researchers had informed the patients and met the requirements of the ethics committee. There is no significant difference in the basic information of the two groups of patients ($P > 0.05$), and they are comparable.

1.2 Methods

The control group received routine care in the operating room. In other words, the nurse helped the patient to make various preparations before the operation, cooperated with the doctor during the operation, sent the patient back to the ward after the operation, and completed the handover with the nurse in charge.

Each patient in the observation group was equipped with a professional intervention nurse to provide preoperative and postoperative nursing guidance. (1) The selection criteria for nursing staffs are as follows. Participated in the above-mentioned supervising nurses and nurse titles, with at least 3 years of clinical work experience, excellent communication skills, cerebrovascular intervention and nursing-related training, and after passing the assessment.

(2) Preoperative treatment: Perform individual condition and cognitive assessment of the patient, understand the basic situation and progress of the treatment and understand the patient's mental health in this way, and treat patients who feel unhealthy. Strengthen by providing psychological intervention guidance. Psychological counseling. Some patients have insufficient knowledge of the disease; in this case, one-on-one personal education, health education, and introduction to the cerebrovascular interventional treatment environment should be provided. Patients should be instructed to conduct trauma and defecation training before surgery, and they should be encouraged to do appropriate physical training. Carry out exercise training to recover from the operation.

(3) Intraoperative treatment: During the operation, the patient is accompanied by a professional interventional nurse to the operating room, and he chooses a comfortable posture with the nurse's help. The nurse accompanies you throughout the process, observe your feelings at any time, provide psychological counseling and help you relax. It can prevent patients from being overly nervous, causing obvious changes in blood pressure, and preparing for emergency treatment for unexpected problems during surgery so that they can respond quickly.

(4) Postoperative care: observe the patient's puncture hole, if the suture device has no puncture hole, press it in with a salt bag. Instruct patients to adjust their daily drinking water between 800ml and 1200ml as soon as possible to eliminate contrast. Observe local bleeding and infection after surgery to avoid bedsores.

1.3 Observation Indicators

(1) Compare changes in blood pressure of patients during surgery.

(2) Compare the incidence of postoperative complications in patients, mainly including hematoma, lower back discomfort, dysuria, insomnia and dreaminess.

1.4 Statistical Methods

SPSS 20.0 statistics software was used for data analysis, measurement data was expressed as ($\bar{x} \pm s$), t-test; count data was expressed as (%), $\chi 2$ test. $P<0.05$ means that the difference is statistically significant.

2 Results

2.1 Comparative Analysis of the Changes in Patients' Blood Pressure

During the operation, the systolic blood pressure the observation group increased by (11.85±1.66) mmHg, and the diastolic blood pressure was (4.63±0.45) mmHg. The control group patients' systolic blood pressure increased by (22.12±1.98) mmHg, and the diastolic blood pressure was (8.36± 3.69) mmHg, the two results are significantly different, and the blood pressure fluctuation range of the control group is greater ($P < 0.05$).

Table 1. Comparison of intraoperative blood pressure changes between the two groups ($\bar{x} \pm s$)

Group	Systolic Blood Pressure (mmHg)	Diastolic Blood Pressure (mmHg)
Observation (n=88)	11.85±1.66	4.63±0.45
Control (n=88)	22.12±1.98	8.36±3.69
χ^2	12.367	11.679
P	<0.001	<0.001

2.2 Comparative Analysis of the Incidence of Complications in Patients'

The incidence of complications in the observation group was lower than that in the control group. In the observation group, the incidence of hematoma, low back discomfort, dysuria, insomnia and dreaminess were 2.27%, 2.27%, 1.14%, 0% respectively, and the total incidence was 5.68%; in the control group, the incidence of hematoma, low back discomfort, dysuria, dysuria, and insomnia and dreaminess were 6.81%, 5.68%, 3.41%, 4.55% respectively, and the total incidence was 20.45%. The difference between the observation group and the control group was significant ($P < 0.05$), see Table 2 for details.

Table 2. Comparison table of the incidence of complications in patients [n(%)]

Group	Hematoma	Low Back Discomfort	Difficulty Urinating	Insomnia and Dreaminess	Total
Observation (n=88)	2 (2.27)	2 (2.27)	1 (1.14)	0	5 (5.68)
Control (n=88)	6 (6.81)	5 (5.68)	3 (3.41)	4 (4.55)	18 (20.45)
P			<0.05		

3 Discussion

Currently, the treatment of cerebrovascular diseases is mainly based on minimally invasive surgery. With the continuous advancement of technology, interventional surgery has become the first choice for clinical treatment, and its therapeutic effects have been proven through long-term clinical applications. Ensuring surgical safety in interventional surgery is the basis of surgical treatment. Conventional treatment usually completes the surgical process under the guidance of a doctor. However, the interventional operation was performed under local anesthesia, and the patient was fully awake. The tension and anxiety of the operation can easily cause changes in vital signs and cause side-effects. Different nursing interventions are carried out in the three phases: preoperative nursing, preoperative, intraoperative and postoperative. Psychological treatment and postoperative rehabilitation guidance are provided to complete the preoperative visit before the operation and stabilize the patient's preoperative mood. The patient is accompanied during the entire operation and provided with relaxation guidance to improve the patient's coordination ability, and reduce postoperative vital signs that are unstable due to emotional tension. Pay attention to signs of recovery and vitality after surgery to prevent complications and obtain better results.

In conclusion, through perioperative nursing intervention, the recovery speed of patients can be improved, and the incidence of postoperative complications can be reduced. The mental state of the patients before the operation was adjusted, the mood was calmed, the compliance of the patient was improved, and the patient's resistive emotions were reduced. At the same time, if the patients can get good nursing care after surgery, the probability of postoperative complications is reduced, so that patients have better results in surgery, and its application in clinical practice is worthy of promotion.

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Journal of Clinical and Nursing Research

Research Article

A Rare Case of Intrauterine Adhesion Caused by Intrauterine Fallopian Tube Incarceration

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Abstract: Hysteroscopy is widely used for the detection and treatment of intrauterine adhesion. Such technique, however, sometimes has limitations and even second damages. We report a rare case of severe intrauterine adhesion caused by uterine perforation with a fallopian tube incarceration. A 24-year-old woman underwent severe intrauterine adhesion and secondary infertility caused by fallopian tube incaceration into the uterine cavity after postpartum curettage. First hysteroscopy created a false passage through the previous uterine perforation, entered into the cavity of incarcerated fallopian tube, and led to iatrogenic hydrosalpinx. Secondary hysteroscopy combined with laparoscopy revealed a connection between the right tubal lumen and the uterine cavity by the false passage, released the adhesion, and reconstructed the uterine cavity. Early recognition of uterine perforation or tissue incarcerarion is significant in preventing further damage.

Keywords: Curettage; Fallopian tube; Hysteroscopy; Laparoscopy; Uterine perforation

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

Intrauterine adhesion (IUA) is mainly reported as a complication after intrauterine surgery, such as dilatation and curettage. IUA often result in menstrual and fertility disorders. Hysteroscopy the most reliable technique for IUA detection and treatment, caused by the direct vision of the uterine cavity which enables to accurately identify the presence, localization and extent of IUA[1]. Uterine perforation is rarely reported as a cause of IUA, but also a common complication of first-trimester suction curettage or postpartum evacuation of retained placental tissues, most without symptom and goes undetected[2]. Sometimes, it may contain incarcerated small bowel or omentum. But in rare cases, there are several reports of fallopian tube incarceration[3-5] or ovary incarceration[6], which are easily misdiagnosed like synechia, endometrial polyp, or incomplete abortion[7]. We report an unusual case of IUA with a false passage inadvertently got through during hysteroscopy which communicated with the intrauterine incarcerated oviduct cavity and leaded to iatrogenic hydrosalpinx.

2 Case report

In 2016, the patient was 24, gravida 2 para 1, underwent postpartum curettage 4 weeks after delivery for removal of retained placental membranes. Then, she kept lactation for 8 months. After stopping breastfeeding in half a year later, her menstrual cycle had not yet recommenced. She took progestogen therapy. Her menstruation recovered gradually, but the menstrual flow was very minimal, only a tenth of the former volume. In addition, the patient complained frequently of the watery leucorrhea between periods and the inefficiency of anti-inflammatory treatment. In December 2019, she was offered diagnostic hysteroscopy in local hospital, which confirmed severe IUA, polyp-like tissues in cervical canal and closure of the upper half of uterine cavity by scar conglutination. Subsequently, she was given the periodic treatment of oestradiol valerate and progestin for 4 months to promote endometria growth. Even so, her menstrual volume was still very few. She was

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then referred to our hospital for further management. Except of IUA, ultrasound examination also showed hydrosalpinx (Figure 1.), which was never indicated before hysteroscopy. Due to her fertility requirement, she was recommended hysteroscopy combined with laparoscopy. During our hysteroscopy, there were still filled with cloudy adhesions in a narrow 10cm-deep uterine cavity (Figure 2.(a)), and some polyp-like tissues in cervical canal. Furthermore, it also showed the absence of myometrium and endometrium in the fundus of uterine cavity. Through the thin serosa membrane, the bowel movements were visible dimly. Immediately, the surgeon stopped the hysteroscopy and transfered to the laparoscopy. At laparoscopy, the right fallopian tube was partly incarcerated in the uterine fundus, with severe hydrosalpinx (Figure 2.(b)). Therefore, the surgeon suspected the presences of a dated perforated area on the uterine fundus and an intrauterine fallopian tube incarceration, and that the view of hysteroscopy wasn't uterine cavity, but incarcerated oviduct cavity. In this way, it could rationally explain the reason of patient's watery leucorrhea and hydrosalpinx. After neosalpingostomy and hysterorrhaphy, the uterine cavity was successfully entered during the repeat hysteroscopy, but it only showed the left tubal ostia. After the adhesiolysis of the right uterine cavity, her uterine structure was enabled to be reconstructed completely. Meanwhile, the polyp-like tissues in cervical canal were taken to biopsy. With an uncomplicated postoperative course, she was discharged from the hospital 6 days later. Eventually, the pathological evidences proved that there were no polyps, but smooth muscle tissues and a few oviduct mucosa tissues, with chronic inflammation(Figure 3). It confirmed the surgeon's suspicions. After 3 months, the patient's second-look hysteroscopy was normal and her period recovered.

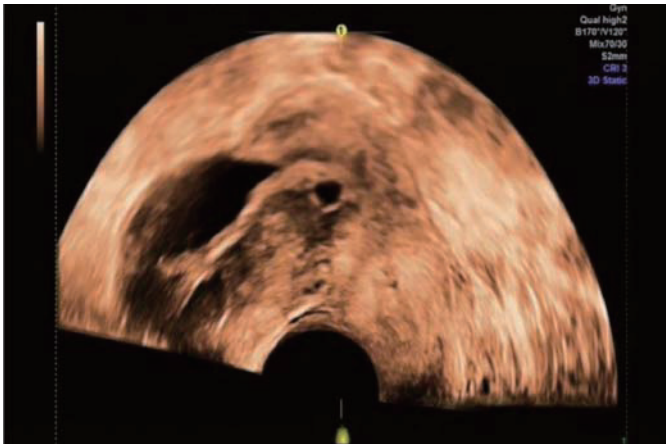

Figure 1. Transvaginal ultrasound image showing right hydrosalpinx begun at the uterine corner and a small no echo zone in intrauterine cavity.

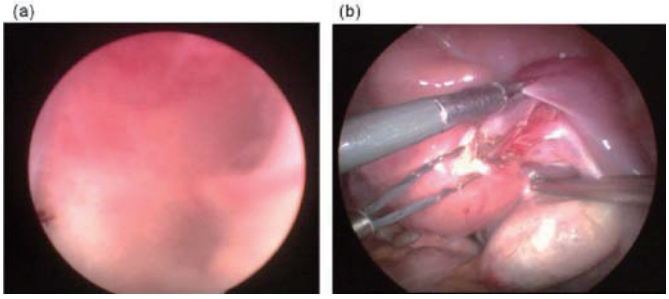

Figure 2. Hysteroscopy and laparoscopy. (a) Hysteroscopy showing a direct-view of fallopian tube cavity through the false passage. (b) Laparoscopic view showing the right fallopian tube incarceration.

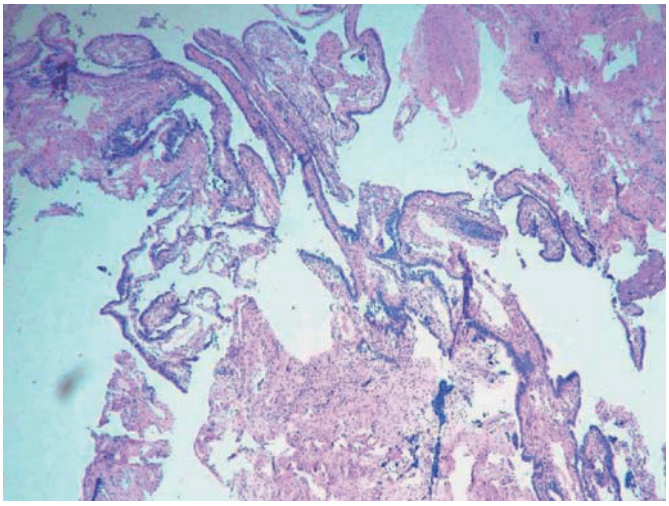

Figure 3. Microscopic examination in hematoxylin-eosin staining showing oviduct mucosa tissues, with chronic inflammation. Original magnification×40.

3 Discussion

This is a unique case of IUA on account of

intrauterine fallopian tube incarceration. Although there were several similar reports[3, 4, 7], there had been no report of a direct-view of tubal lumen through the passage of uterine perforation during hysteroscopy. Another unique aspect of this case is that an iatrogenic hydrosalpinx was formed because of the false passage between uterus cavity and fallopian tube cavity, and presented by ultrasound after diagnostic hysteroscopy. Therefore, the process of its diagnosis became more difficult and circuitous. During the process, there are three suspicious points worth considering and exploring. First, the hysteroscopy findings of IUA were not consistent with the patient's symptoms. In severe cases of IUA, the cavity is more or less completely obliterated resulting in amenorrhoea and reproductive failure[8]. At present, hysteroscopy is the recommended standard diagnostic method and treatment for IUA[9]. In our case, the view of first hysteroscopy was shown the close of uterine cavity without endometria, which meant severe adhesion and potentially leaded to amenorrhoea. However in reality, the patient just complained of hypomenorrhea inconsistent with findings of hysteroscopy. Second, the patient also complained of frequent copious watery vaginal discharge with no response to anti-inflammatory treatment. In general, watery leucorrhea is one clinical presentation of inflammation and tumors of the reproductive system such as vaginitis, cervicitis, fallopian tuber carcinoma, endometrial cancer and etc. Her symptoms signs and test results didn't support tumor, but her repeated anti-inflammatory treatments were ineffective. Third, disorders of the fallopian tubes, mainly obstruction and peritubal adhesion, such as hydrosalpinx, are the most common causes of female infertility, accounting for 30%–40% of cases[10]. However, the patient was not infertile, and her ultrasound exams had never shown hydrosalpinx before hysteroscopy. Furthermore, hydrosalpinx is usually found at the end of the fallopian tube, but in our case, it was begun at the right uterine corner. Therefore, we suspected that the truth was iatrogenic hydrosalpinx caused by a false passage created during hysteroscopy, which was confirmed by subsequent laparoscopy. Additionally, laparoscopy and hysteroscopy revealed an intrauterine fallopian tube incarceration. From this, we inferred that an uterine perforation probably had happened during her postpartum curettage and her right fallopian tube had been exactly brought into the uterine cavity along the perforation. Postoperative histopathological observation of the polyp-like tissues indicated tubal mucosa with chronic inflammation and confirmed our hypothesis. Unfortunately, her uterine perforation hadn't been undetected immediately during the procedure. After that, the intrauterine oviduct as a foreign matter, repeatedly stimulated endometrium, produced inflammatory mediums, and resulted watery leucorrhea and intrauterine adhesion. Nevertheless, the patient's amenorrhea during lactation covered up the adhesion and aggravated its degree. On account of severe adhesion, the false passage was created unconsciously during the first hysteroscopy, which caused iatrogenic hydrosalpinx. Also because of this, the patient underwent laparoscopy and hysteroscopy surgery, and the true reason of IUA was found.

In summary, we have reported a rare case of IUA that caused by uterine perforation. IUA caused by postpartum curettage may be combined with uterine perforation, oviduct incarceration and etc. After delivery, breastfeeding and amenorrhea may mask the real condition of IUA and aggravate the adhesion degree. During the diagnosis and treatment of severe IUA by hysteroscopy, there may be a false passages or even an uterine re-perforations. So, the early recognition of a false passage or an uterine perforation is significant in preventing further damage to the uterus.

Acknowledgement

The authors express their appreciation to the patient who accepted the publication of her medical history.

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Journal of Clinical and Nursing Research

Research Article

Clinical Application of Minimally Invasive Surgery in Pain and Complications after Spinal Trauma

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Abstract: ***Objective:*** To study and evaluate the incidence of pain and complications in patients with spinal trauma after minimally invasive treatment. ***Methods:*** The research period was selected from January 2018 to December 2020, and 40 patients with spinal trauma were selected. According to the random number table scheme, they were divided into the study group and the control group. The treatment scheme of the control group was traditional surgery, and the treatment scheme of the study group was minimally invasive surgery. The indicators of the two groups were compared and analyzed. ***Results:*** Compared with the two groups of surgery and postoperative recovery related indicators, the study group had more advantages (P<0.05); Compared two groups of postoperative NRS score, VAS score and the incidence of complications, the study group had more advantages(P<0.05). ***Conclusion:*** Minimally invasive treatment of spinal trauma has significant clinical effect, which can effectively relieve postoperative pain and reduce the incidence of various complications.

Keywords: Minimally invasive treatment; Spinal trauma; Pain; Complication

Publication date: January, 2021
Publication online: 31 January, 2021
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Spinal trauma is a kind of bone surgery trauma with high clinical incidence rate. The cause of injury is related to external factors such as traffic accidents and high altitude falling. It can cause serious spinal cord injury, and if it fails to get symptomatic treatment in time, it can induce severe paraplegia and other critical diseases. The quality of life of patients with severe disease is[1]. Open surgery is the routine scheme for the clinical treatment of spinal trauma, which has exact curative effect, large incision area, serious damage to the patient's body caused by intraoperative operation, and it is easy to induce postoperative pain, and can also lead to increased incidence of postoperative complications in the recovery period[2]. The clinical application of minimally invasive surgery in the treatment of spinal trauma in our hospital is lack of systematic research and analysis.

1 Material and methods

1.1 General information

The study period was from January 2018 to December 2020. 40 patients with spinal trauma were selected and divided into study group and control group according to the random number table scheme. All patients were diagnosed as spinal trauma by CT, X-ray and other imaging examinations, without cognitive and consciousness disorders, and agreed to participate in the study. The baseline clinical data of the two groups were summarized and analyzed. The gender ratio of the study group was 12:8, the age range was 25-67 years old, with an average of (46.05 ± 2.88) years old, and the time from trauma to treatment was 1-9 hours, with an average of (5.08 ± 0.26) hours. In the control group, the ratio of male to female was 13:7, the age range was 27-68 years old, with an average of (46.13 ± 2.94) years old, and the time from trauma to treatment was 1-10 hours, with an average of (5.26 ± 0.38) hours. There was no significant difference in the baseline data (P > 0.05).

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1.2 Methods

The patients in the control group were treated with traditional surgery, the doctor assisted the patients to adjust to prone position, and the anesthesia scheme was general anesthesia.C-arm fluoroscopy was used to observe the site of spinal trauma. The midline area of spinal trauma was selected, and appropriate surgical incision was set. Skin tissue and subcutaneous tissue were cut. Paravertebral muscles were properly stripped to fully expose the lateral area of facet joint. Blunt dissection and distraction of adjacent tissue around the joint to ensure a clear surgical field.After the operation, local tissue suture was performed.

The patients in the study group were treated with minimally invasive surgery, the doctor assisted the patients to adjust to prone position, and the anesthesia scheme was general anesthesia.After anesthesia induction, C-arm machine was used to locate the injured spine, and the incision site was set outside the pedicle of the injured vertebrae.Blunt dissection of multifidus and longissimus muscle in local trauma area, gradually stripping to the muscle and soft tissue area.The operation channel was set up to fully expose the head and tail mastoid process and isthmus of spine, and the pedicle probe was used to open the working channel.Pedicle screw was inserted into the injured area, and the injured area was fixed properly. Percutaneous plastic rod was used to reset the injured area, and the injured area was sutured properly.

1.3 Evaluation criteria

The related indexes of operation and postoperative recovery were compared between the two groups, including intraoperative blood loss, ambulation time, operation and hospital stay.

The NRS score and VAS score of the two groups before and after operation were statistically analyzed. The score range was 0-10 points, and the score was directly proportional to the degree of pain.

The incidence of postoperative complications such as incision infection, traumatic paraplegia and dyskinesia were analyzed.

1.4 Statistical methods

SPSS 23.0 software was used to calculate all kinds of data. In this study, the measurement data was ($\bar{x} \pm s$), the test method was t, the count data was (%), and the test method was χ^2. If $P < 0.05$, there were differences between groups.

2 Results

2.1 Compare the two groups of operation and postoperative recovery related indicators

Compared with the two groups, the study group had more advantages ($P < 0.05$).

Table 2. Comparison of related indexes of operation and postoperative recovery between the two groups ($\bar{x} \pm s$)

Group	Intraoperative blood loss (ML)	Ambulation time (H)	Operation time (min)	Length of stay (d)
Study group (n = 20)	122.75±25.88	36.68±9.25	118.85±7.66	8.38±2.05
Control group (n = 20)	289.46±35.17	57.01±12.49	169.68±8.45	15.49±4.55
T value	17.073	5.849	19.931	6.371
P value	0.000	0.000	0.000	0.000

2.2 The NRS score and VAS score of the two groups before and after operation were compared

There was no significant difference in NRS score and VAS score between the two groups before operation ($P > 0.05$), but the study group had more advantages after operation ($P < 0.05$).

Table 2. NRS score and VAS score ($\bar{x} \pm s$) before and after operation were compared between the two groups

Group	NRS score		VAS score	
	Before operation	After operation	Before operation	After operation
Study group (n = 20)	5.63±0.88	1.82±0.48	5.92±0.98	1.25±0.33
Control group (n = 20)	5.69±0.75	4.03±0.77	5.97±0.95	4.19±0.36
T value	0.232	10.892	0.163	26.933
P value	0.817	0.000	0.870	0.000

2.3 The incidence of complications was compared between the two groups

Compared with the incidence of complications in the two groups, the study group had more advantages ($P < 0.05$).

Table 3. Compared the incidence of complications between the two groups (*n* /%)

Group	Incision infection	Traumatic paraplegia	Dyskinesia	Incidence of complications
Study group (*n* = 20)	1	0	1	2 (10.0)
Control group (*n* = 20)	4	1	3	8 (40.0)
χ^2 value				4.800
P value				0.028

3 Discussion

Spinal trauma mainly refers to spinal bone, joint and ligament injury, some patients with posterior high spinal nerve and spinal cord injury, the cause of injury is directly or indirectly related to external violence[3]. The incidence of physical injury and paralysis was high.There are many methods for clinical treatment of spinal trauma, and doctors need to make a comprehensive analysis of the patient's injury, and then determine a reasonable and effective treatment and intervention plan[4]. Spinal trauma patients such as fracture dislocation or spinal displacement lead to nerve root spinal cord injury, and compression nerve root, resulting in reduced spinal stability, unable to effectively bear body weight, such patients need to complete decompression and reduction through surgery, so as to restore the symptoms of spinal shape, and remove the compression nerve root and spinal cord bone, improve spinal stability[5].

Traditional open surgery is a new scheme for the clinical treatment of spinal injury, which has exact clinical effect and relatively simple intraoperative use[6]. Open surgery incision area is large, intraoperative operation is easy to lead to trauma, spinal peripheral tissue injury, and postoperative recovery is slow, it is easy to induce all kinds of adverse reactions, affecting the recovery effect of spinal function.Minimally invasive surgery belongs to a new clinical treatment of spinal trauma. Compared with the traditional open method, this method uses C-arm machine to assist fluoroscopy observation, and uses small incision combined with working channel to complete the reduction of the trauma area, which can avoid the damage to the healthy tissues around the spine during the operation, and the small incision mode can reduce the contact area between the tissues around the spine and the air, and significantly reduce the incidence of complications Low incidence of postoperative complications[7]. At the same time, the small incision injury mode can relieve the postoperative incision pain, is conducive to early ambulation, can effectively shorten the overall recovery time of patients, and help to improve the prognosis.

Summary and analysis of the relevant data in this study, the study group of patients with intraoperative blood loss, ambulation time, operation and hospitalization time and other intraoperative and postoperative recovery related indicators are better than the control group, it can be considered that minimally invasive treatment can effectively shorten the operation time, minimally invasive operation mode of patients with less intraoperative blood loss, can significantly reduce the body pain caused by operation, reduce the impact on the surrounding environment The injury of healthy tissue can improve the safety of operation and shorten the recovery time.The postoperative NRS score and VAS score of the study group were better than those of the control group. It can be considered that minimally invasive treatment using small incision to complete the operation can effectively relieve postoperative pain and promote early postoperative ambulation. The incidence of postoperative complications such as incision infection, dyskinesia and traumatic paraplegia in the study group was lower than that in the control group. It can be considered that minimally invasive treatment using small incision to complete the operation has slight interference to the internal environment of the machine, and can significantly reduce the incidence of various complications.

Compared with the traditional open surgery, the operation of minimally invasive surgery is relatively complex, and the requirements for doctors' operation technology and clinical experience are higher. During the operation, it is necessary to ensure a high degree of concentration and master the relevant operation process of minimally invasive surgery, so as to ensure the curative effect and safety of the operation[7]. Doctors need to strengthen the study and research of minimally invasive surgery technology, long-distance cautious and meticulous work attitude, to ensure the safe and smooth completion of the operation to the greatest extent.At the same time, the human spine peripheral nerve is dense, the operation should

strictly follow the basic principles of minimally invasive surgery, accurate and complete damage area stripping and fixation treatment, avoid damage to the surrounding healthy nerve tissue, in order to reduce the injury.In addition, doctors need to accurately grasp the scope of application of minimally invasive surgery. If the patient's injury is complex and severe, traditional open surgery is recommended[8].

In conclusion, the clinical effect of minimally invasive surgery in patients with spinal trauma is significant, which can effectively relieve postoperative pain and reduce the incidence of various complications. The surgical efficacy and safety are better than the traditional open surgery, which is worthy of comprehensive promotion. At the same time, this study lasted for a short time, affected by many factors, lack of horizontal comparative analysis of the same type of data content, the number of patients is less, and the process is not perfect. The specific effect of minimally invasive treatment still needs to be continuously studied and analyzed.

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Journal of Clinical and Nursing Research

Research Article

Application Effects of Total Percutaneous Technique in Endovascular Repair of Abdominal Aortic Aneurysm

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Funding: Shanghai Fourth People's Hospital Medicine Discipline Boosting Plan (SY-XKZT-2020-2005); Shanghai Fourth People's Hospital Medicine Discipline Boosting Plan (SY-XKZT-2020-1005)

Abstract: ***Objective:*** To investigate the effectiveness of total percutaneous technique in endovascular repair of abdominal aortic aneurysm. ***Methods:*** Divide patients into two groups based on random tests. The control group received conventional treatment, and the experimental group received modified treatment. The changes in self-management ability, comfort level and recovery time before and after treatment were compared between the two groups. ***Results:*** The comfort level and self-management ability of the experimental group were significantly higher than that of the control group, and the recovery time was significantly shorter than that of the control group. The difference was statistically significant ($P<0.05$). ***Conclusion:*** Puncture suture can safely and effectively repair the intracavity of abdominal aortic aneurysm.

Keywords: Total percutaneous technique; Abdominal aortic aneurysm; Endovascular repair

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

Abdominal aortic aneurysm (AAA) is the most common of all abdominal aortic aneurysms. The most common feature is the gradually limited and irreversible expansion of the abdominal aortic wall. If left untreated, it will eventually rupture and is often life-threatening. AAA is more common in the elderly. In the elderly, the average age of onset of AAA is mostly over 60 years old. Clinically, AAA refers to the lesion located below the level of the renal artery, and the lesion located above the renal artery is called thoracoabdominal aortic aneurysm. The most fundamental cause of AAA is the decomposition of elastic fibers and collagen fibers in the abdominal aortic wall, which will significantly reduce the mechanical strength of the blood vessels, causing part of the blood vessel walls to expand and form aneurysms. Many patients with AAA do not have the clinical symptoms that often occur during physical examination. The patient's symptoms include abdominal pulsating lumps, pain, pressure symptoms, embolism symptoms and rupture symptoms[1]. Currently, due to the small trauma and fast recovery, endovascular repair has become an important method for the treatment of abdominal aortic aneurysms. Traditional endovascular repair requires surgical exposure of bilateral common femoral arteries to establish a method, which leads to a high incidence of related complications. With the emergence of vascular suture devices and the accumulation of surgical experience in recent years, percutaneous dural aortic

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repair has become a widely used, safe and effective treatment method. Combining literature reports and clinical experience from June 2019 to May 2020, our hospital adopted a total percutaneous stitching technique to repair abdominal aortic aneurysms and has achieved satisfactory results. The results are as follows:

2 Information and Method

2.1 Information

We selected 50 patients with abdominal aortic aneurysm admitted during June 2019 to May 2020 for the study. All patients have been completely punctured. All patients were diagnosed with abdominal aortic aneurysm through preoperative CT and angiography. Based on the random number table, 25 cases were randomly assigned to the control group and 25 cases were randomly assigned to the experimental group. The control group consisted of 14 men and 11 women, aged 45 to 72 years, and there were 13 men and 12 women in the experimental group, aged 46 to 74 years. The difference was statistically significant ($P<0.05$). This study has been approved by the ethics committee.

2.2 Methods

2.2.1 Surgical Methods

All patients were diagnosed with abdominal aortic aneurysm through enhanced CT scan of the abdominal aorta before surgery. The artery should be cut and sutured during the operation to prevent bleeding at the puncture site. All patients received general anesthesia. Before implanting the stent, the stapler is pre-positioned by applying two vascular sutures to the two femoral arteries. After inserting and correcting the stent, tighten the suture and close the arterial puncture hole. After getting off work, manually press the puncture area on the platform. After returning to the ward, the vital signs were monitored. Observe the blood circulation, sensory and motor nerve functions of the lower limbs. Prevent lung infections and deep vein thrombosis in the lower extremities. Instruct patients to perform functional exercises and psychotherapy[2].

2.2.2 Pre-operative Care Methods

The control group and the experimental group received Tpevar treatment by the same cardiothoracic surgeon. The control group received conventional care after operation, and the experimental group received modified care. In order to promote hemostasis at the puncture site, the control group pressed the puncture site for 30 minutes after the operation. To promote wound healing, self-adhesive bandages were used to fix the groin for 48 hours, and sandbags were applied for 6 hours to prevent bacterial infection. Preoperative care: Before surgery, appropriate inhalation of low-flow oxygen according to the patient's cardiopulmonary function can improve the patient's blood oxygen saturation and cardiopulmonary function. In order to avoid the rupture of abdominal aortic aneurysm, patients should eat light foods that are easy to digest, have low irritation and are rich in crude fiber, and drink plenty of water. If the patient has difficulty defecation or constipation, he/she should be treated according to his/her own situation. In order to observe the progress of the patient's condition, it is necessary to monitor changes in blood pressure, heart rate and other important indicators in real time. If the patient suddenly develops symptoms such as back pain, high blood pressure, and shock, etc., he/she must immediately be prepared for emergency surgery.

2.2.3 Post-operative Care

In order to speed up the recovery of patients, the time of compression at the puncture site in the experimental group was changed to 10 minutes. After compression, the patient was fixed in the groin area with a self-adhesive bandage for 12 hours, and then the patient was asked to move the hip joint for 6 hours. In order to improve postoperative comfort, patients in the experimental group did not use sandbags after surgery. Vital signs such as blood pressure and heart rate should be continuously monitored after the operation. If there is any change, you should report it to your doctor in time and take appropriate measures according to your conditions. At the same time, pay attention to observe the blood circulation and puncture of the patient's lower limbs to avoid complications such as thrombosis[3].

2.3 Observation Indicators

In this study, the Kolkaba Comfort Scale was used as an indicator of patient comfort after surgery. The Kolkaba Comfort Scale evaluates the comfort of patients from four aspects: environment, physiology, psychology and social culture, and the score is

directly proportional to comfort. Meanwhile, we use the Pap index scoring method to evaluate the recovery level of patients' self-management ability after surgery. The Barthel index represents the patient's self-treatment level, and the score is directly proportional to the patient's self-treatment level. Meanwhile, medical staff recorded the bedbound time, hospitalization and complications of the two groups of patients.

2.4 Statistical Methods

The SPSS19.0 software was used for statistical analysis, and the common femoral artery diameter before operation and one month after operation were compared by one-way analysis of variance. $P<0.05$ indicated that the difference was statistically significant.

2 Results

Compared with the control group, the Barthel index and the Kolkaba score of the experimental group after nursing care were significantly higher than those of the control group. After the statistical significance test, the difference between the two groups was found to be statistically significant. Comparing the time spent in bed, hospital stay and the incidence of complications between the two groups, the time spent in bed and hospital stay in the experimental group were significantly shorter than those of the control group.

Table 1. Patients Scoring Results Analysis

Group	No. of Cases	Barthel Index	Kolkaba Score
Experimental	24	77.01+5.82	79.07±7.34
Control	23	62.23±7.37	68.52±10.86
1	-	9.32	5.4
P		<0.05	<0.05

3 Discussions

In recent years, China is gradually aging, and the incidence of AAA is increasing. Since AAA is not self-evident, it will eventually rupture if not treated early. Once ruptured, the mortality rate is high, so that more and more attention is paid to treatment. Currently, the main purpose of treatment is to prevent tumor rupture and extend the life of the patient. AAA Patients with clinical symptoms and rupture urgently need surgical treatment, but there is no clear early surgical intervention standard for patients with minor AAA without clinical symptoms. Studies have shown that the diameter of abdominal aortic aneurysm is the most important risk factor for tumor rupture. For patients with tumors less than 5.5 cm in diameter, there was no significant difference in overall mortality and long-term survival between patients who received early surgical intervention and patients who received conventional monitoring and delayed surgery. Abdominal aortic aneurysm resection and artificial angioplasty have been used to treat abdominal aortic aneurysms for many years, and they are still the main modalities at home and abroad. Compared with the past, the progress of surgical technology, the continuous development of anesthesia and the continuous improvement of intensive care technology have greatly improved the effectiveness of open surgery in the treatment of AAA. The safety guarantee of surgical operation is far from this, which greatly improves the preoperative and postoperative survival rate of AAA[4].

The invention of the Perclose P'roGlide vascular stapler is based on the design principle of vascular suture. After the 26F sheath is pulled out, two vascular staplers can be used to suture the vascular puncture port. According to many reports in the literature, the percutaneous puncture suture technique is safe and effective. Compared with the traditional femoral artery incision, it has the advantages of less trauma, shorter operation time and postoperative bedbound time, less bleeding, higher patient comfort and fewer complications[5]. It can also be performed under local anesthesia, which can significantly reduce the risk of anesthesia in elderly and high-risk patients. In the treatment of intravascular aneurysms, when the branch is connected and the main stent is released, the branch transmission sheath must be contracted and reinserted into the artery sheath. At this time, the operator must continuously press the puncture hole to stop bleeding, which increases the exposure time to radiation. In addition, since the perforation is large, it is difficult to stop bleeding by pressing, and the bleeding is more serious. The original 10F

arterial sheath can be reinserted using the improved method used in this study. When the branch needs to be reinserted, loosening the blue wire can reduce radiation exposure time and blood loss[6]. The average intraoperative blood loss and operation time of this group were lower and shorter than the traditional percutaneous intravascular aneurysm stitching technique reported in the literature. The incidence of complications associated with this method is also very low. Compared with the use of the aortic sheath for percutaneous suture and repair of intravascular aneurysms, the improved puncture and suture technique proves the effectiveness of this method by saving the cost of two aortic sheaths without increasing blood loss and operation time. It not only achieves complete minimally invasiveness, but also meets the psychological expectations of patients. It also solves the shortcomings of traditional abdominal aortic aneurysm surgery, which requires bilateral groin incisions and has many potential complications such as bleeding, infection and lymphatic leakage. Therefore it is widely popular with patients and doctors.

However, due to the difficulties of advanced technology, few vascular surgery centers in China can perform this kind of surgery, and there is no comprehensive care program for such patients. Our department explored the care for this group of patients based on their clinical experience and professional skills[7]. With conventional hemangioma repair management as the foundation, strict monitoring of vital signs, timely treatment of pain and other complications, and adjustment of drugs in accordance with the doctor's guidance are the main points of pre-operative and postoperative management of the puncture site after the abdominal aortic aneurysm is completely punctured. As the diameter of the puncture point is larger than that of the conventional puncture point, complications such as bleeding, pseudoaneurysm and arteriovenous fistula are prone to occur, and due to the suture at the puncture point, there are local infections, arterial thrombosis, arterial dissection and other related issues[8]. Carefully observe and follow up. Insufficient treatment can lead to undesirable consequences. Due to the advanced total percutaneous technique, the incidence of complications after most traditional abdominal aortic aneurysms is greatly reduced. However, nursing work cannot be relaxed. Do a good job in preventing lung infections and deep vein thrombosis in the lower extremities, actively communicate with patients and their families, and strengthen psychological treatment.

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Journal of Clinical and Nursing Research

Research Article

Therapies of SARS-CoV-2

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Abstract: The Coronavirus disease 2019 (COVID-19) pandemic caused by SARS-CoV-2 has resulted in a severe global health crisis. There are no current specialized therapies available to the virus. However, several possible treatments show some effectiveness on treating the virus, such as medication, convalescent plasma therapy, and vaccine. This paper will discuss and evaluate the effectiveness of these treatments on SARS-CoV-2.

Keywords: Coronavirus; Therapies; Health crisis

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

SARS-CoV-2 is a coronal respiratory viral disease, packaged by RNA viruses that are positively stranded in the order of Nidovirales. The virus particles are round or elliptical with a diameter of about 80 to 120 nm, belongs to Betacoronavirus[1,2]. They are wrapped in a lipid bilayer provided by the host cell, which contains nucleic acid and nucleocapsid protein (envelope, membrane, spike protein). The length of each group of SARS-CoV-2 is about 30,000 nucleotides. The gene sequence shows that SARS-CoV-2 also belongs to the Betacoronavirus type, and SARS-CoV-2 is 79% similar to the coronavirus found in Chinese chrysanthemum bats, such as MERS-CoV and SARS-CoV. However, SARS-CoV-2 can also bind with ACE2 as a receptor, enters the lung through respiratory epithelial cells for replication[3,4]. The virus can survive under low temperature, on human hands, droplets, wooden products, stainless steels, etc. The main transmission of SARS-CoV-2 is when two people are in close contact, and one of them inhales the respiratory droplets produced by the infected person through coughing, sneezing, or even talking. The common symptoms of SARS-CoV-2 are fever, cough, short breath, tiredness, and thick phlegm [7,8].

The first case of SARS-CoV-2 was found in Wuhan, China, on December 8th, 2019. The outbreak was announced by WHC; NHC and China CDC were involved in the investigation and response of the virus on December 31st, 2019. By January 11th,2020, the first case was identified outside of China (in Thailand). Then a case was confirmed in another province of China on January 19th, the infected person had traveled from Wuhan [6]. Until this day, there are 22.8 million cases confirmed worldwide, with 796 thousand death from the virus [5].

2 Medical treatment

2.1 Lopinavir-Ritonavir

Researchers haven't discovered a specific therapy that can effectively treat SARS-CoV-2. However, several medications have been confirmed as possible treatments for the disease. Lopinavir-Ritonavir is one of them, which is a medication used for controlling HIV infection. It helps to decrease the amount of HIV in the human body, thus the immune system can function better (But it's not the cure for HIV) [9]. A randomized, controlled, open-label clinical trial was launched in March, in the U.S. In the trial, patients were randomly distributed in two groups with a ratio of 1:1, which either receive Lopinavir-Ritonavir (400mg, and 100mg) twice a day or standard-care for two weeks. However, the result wasn't pleasing. A total of 199 patients who are infected by SARS-CoV-2 undertook the randomization; 99 patients were assigned to the Lopinavir-Ritonavir group, and 100 patients were assigned to the standard-care group.

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The time to clinical improvement between these two treatments didn't show an obvious difference, in which the hazard ratio for clinical improvement was 1.31. Moreover, the mortality rate at 28 days between the two treatments is similar: 19.2% (Lopinavir-Ritonavir): 25.0% (standard-care). Additionally, patients experienced gastrointestinal adverse more often in the Lopinavir-Ritonavir group, while severe adverse events were more common in the standard care group. Therefore, Lopinavir-Ritonavir doesn't demonstrate significant benefit beyond the regular treatment, but further clinical trials in patients with the severe condition could help confirm or exclude the possibility of Lopinavir-Ritonavir benefit in treating SARS-CoV-2 [10].

2.2 Hydroxychloroquine

Besides Lopinavir-Ritonavir, Hydroxychloroquine is also a possible therapy for SARS-CoV-2. Chloroquine is a medication used for treating malaria from mosquito bites, as well as other infections caused by a different kind of parasite [11]. An examination of the use of Hydroxychloroquine to SARS-CoV-2 was taken place in a large medical center in New York, with a multivariable Cox model used to compare the results of patients received hydroxychloroquine and those who didn't. Out of 1446 patients, 70 were excluded from the analysis as they either died or were discharged within 24 hours. Among the rest 1376 patients, 881 of them received hydroxychloroquine treatment (600 mg twice on day 1, then 400 mg for a median of 5 days) twice during a median follow-up of 22 days and a half. Compared to those who didn't receive hydroxychloroquine treatment, patients received the treatment demonstrated a more heavy illness at the baseline. 346 patients had a primary end-point event, in which 180 patients received intubation with 66 died subsequently, and 166 died without intubation. The examination shows that there was no significant relationship between hydroxychloroquine treatment and intubation and death. Therefore, the use of hydroxychloroquine wasn't relative to either a greatly decreased or increased risk of the endpoint of intubation or death. This means that a randomized, controlled trial of hydroxychloroquine on SARS-CoV-2 patients is needed to determine its effectiveness [12].

2.3 Dexamethasone

Moreover, Dexamethasone is considered as a possible viable medication for SARS-CoV-2.

It is used to treat arthritis, immune system disorders, allergic conditions, breathing issues, and even certain cancers. Additionally, it is utilized as a test for adrenal gland disorder. Dexamethasone is a corticosteroid hormone, which decreases the natural defensive response of human bodies and reduces symptoms, such as swelling and allergic reactions [13]. A controlled, open-label clinical trial was launched in the U.S. Patients were randomly assigned to oral or intravenous Dexamethasone (dose of 6 mg per day) or to receive usual care. A total of 2104 patients were assigned to the Dexamethasone group and 4321 patients were assigned to the usual care group. 482 patients who received dexamethasone treatment and 1110 patients who received usual care died 28 days after randomization. Researchers found that the proportion of mortality and absolute differences between groups varies greatly based on the level of respiratory support that patients received at randomization. In the Dexamethasone group, the mortality rate was lower than those patients who received invasive mechanical ventilation (29.3% vs. 41.4%), and those who received oxygen without invasive mechanical ventilation (23.3% vs. 26.2%). However, it was higher than those who received no respiratory support at randomization (17.8% vs. 14.0%). Therefore, Dexamethasone resulted in a lower mortality rate among those who received either invasive mechanical ventilation or oxygen alone at randomization in 28 days, but not among patients who received no respiratory support [14].

2.4 VRemdesivir

Remdesivir is considered as an attainable therapy to treat SARS-CoV-2. However, Remdesivir hasn't approved globally for any use, as it is a nucleotide analog with a broad-spectrum antiviral activity that is under investigation currently. Based on the investigation, Remdesivir demonstrates in both vitro and vivo activities in animal models against the MERS and SARS viruses. SARS-CoV-2 is structurally similar to the MERS and SARS, so Remdesivir is a potential cure against it [15]. A randomized, double-blinded, placebo-controlled, multicenter trial of Remdesivir was launched in Hubei, China. Patients were randomly distributed in a 2:1 ratio to intravenous Remdesivir (200 mg on day 1, 100 mg on day 2 to 10) or the same volume of the

placebo group for 10 days. Patients were also allowed to receive Lopinavir-Ritonavir interferons and corticosteroids. The primary goal was time to clinical improvement up to day 28, determined as the days from randomization to a decline of two levels on the six-point ordinal scale of clinical status or discharge from hospital. A total of 237 patients underwent randomization, which 158 was in the Remdesivir group and 79 were in the placebo group. Based on the results, patients who received Remdesivir had a faster clinical improvement than those who received a placebo. Severe conditions among the patients were reported in 102 of 155 patients in the Remdesivir group, and 50 of 78 patients in the placebo group. 18 patients stopped the use of Remdesivir and 4 patients stopped the use of placebo due to severe conditions. Therefore, Remdesivir doesn't show significant clinical benefits to SARS-CoV-2 patients, but the reduction in time to clinical improvement to those treated earlier needs confirmation in larger studies [17].

In May, another double-blind, randomized, placebo-controlled trial of intravenous Remdesivir was conducted in the U.S. A total of 1063 patients were assigned to either Remdesivir (200 mg loading dose on day 1, 100mg for another 9 days) or placebo for 10 days at randomization. The main result was the recovery time, determined by either discharge from the hospital or hospitalization for infection-control purposes. According to the initial results from 1059 patients (538 assigned to Remdesivir and 521 to placebo), patients who received Remdesivir had a median recovery of 11 days, but those who received placebo had a median recovery of 15 days. Additionally, the mortality rate with Remdesivir in 14 days it was 7.1%, and the mortality rate for placebo was 11.9%.

The clinical trial also states that 114 out of 541 patients who received Remdesivir and 141 out of 522 patients who received a placebo showed severe conditions at randomization. Therefore, the researchers concluded that Remdesivir was more effective than a placebo in shortening the recovery time from SARS-CoV-2 [16].

At this point, the cure to treat SARS-CoV-2 still doesn't exist. Lopinavir-Ritonavir doesn't show significant benefits in treating the virus, as its clinical improvement and mortality rate on patients are similar to those patients who only received regular treatment. Additionally, patients who took this mediation often experienced gastrointestinal adverse. Hydroxychloroquine doesn't have a remarkable relationship to either a huge decrease or an increase in the risk of the endpoint of intubation or death on SARS-CoV-2patients, and Dexamethasone was only effective on treating patients who received invasive mechanical ventilation or oxygen at the same time. In the end, the two clinical trials of Remdesivir contradicted with each other. The trial launched by the U.S. suggests that Remdesivir was effective in shortening the recovery time from SARS-CoV-2, but the one launched in China states that Remdesivir doesn't demonstrate outstandingly clinical benefits to SARS-CoV-2patients. Therefore, it seems like Dexamethasone is the only mediation that has a clear result in nursing SARS-CoV-2. However, we still can't consider these medications as a complete failure in treating SARS-CoV-2. Lopinavir-Ritonavir needs further clinical trials in patients with a severe condition to determine the possibility of the clinical benefits of Lopinavir-Ritonavir. Hydroxychloroquine needs a randomized, controlled clinical trial to further determine its effectiveness on SARS-CoV-2. For Redmesivir, other countries must conduct the same clinical trials and then compare the results together. Moreover, the WHO needs to step out and be the leader to conduct the study of the effectiveness of Redmesivir on SARS-CoV-2.

3 Convalescent plasma therapy

There are other therapies besides medication treatments on SARS-CoV-2, convalescent plasma therapy is one of them. This therapy uses the blood of people who've recovered from disease to treat other patients for recovery. Blood donated by recovered patients has antibodies to the disease, and its blood cells need to be removed before injecting into the patient's body, which leaves plasma and antibodies behind [18]. Therefore, convalescent plasma is a potential option to treat SARS-CoV-2. From February 14th, 2020, to April 1st, 2020, an open-label, multicenter, randomized clinical trial was launched in seven different medical centers in Wuhan, China. A total of 103 patients with either severe or life-threatening condition due to SARS-CoV-2, 52 of them was distributed into the convalescent plasma group, and 51 of them was distributed into the control group. The result states that 101 of them completed

the trial, a clinical improvement was shown within 28 days in 51.9% (27/52) of the convalescent plasma group and 43.1% (22/51) in the control group. Additionally, there was no huge difference in 28-days mortality or time from randomization to discharge between two groups. Moreover, convalescent plasma therapy was negatively correlated with a 72-hour viral PCR conversion rate of 72.5% of the control group in the 72-hour recovery plasma group. In the end, two patients had adverse events after the blood injection but were improved with supplementary treatments. Therefore, convalescent didn't demonstrate a significant clinical improvement within 28 days between patients who received convalescent plasma therapy and those who received standard treatment [19].

4 Vaccine

At the same time, the development of a vaccine for SARS-CoV-2 is on the process. Researchers have developed a recombinant adenovirus type-5 (Ad5) vectored SARS-CoV-2 vaccine and launched a dose-escalation, single-center, open-labeled, non-randomized, first-in-human trial in Wuhan, China. Between March 16th and 17th, 2020, 108 healthy participants (51% male, 49% female, mean age 36 years old) have received the low dose (5 × 1010 viral particles), or the median dose (1 × 1011 viral particles), or the high dose (1•5 × 1011 viral particles) of the vaccine. Severe incidents during the first 7 days post-vaccination occurred in 30 (83%) participants in the low dose group, 30 (83%) participants in the middle dose group, and 27 (75%) participants in the high dose group. The pain was the most common severe incident, and the most common systemic severe incidents were fever, headache, and fatigue. However, the severity of these cases was mostly mild or moderate. After the 28 days post-vaccination, no adverse event was reported. On day 14, ELISA and neutralized antibodies increased significantly and peaked at day 28. T-cell response peaked at day 14 post-vaccination. The Ad5 vectored SARS-CoV-2 vaccine is tolerable and immunogenic at 28 days post-vaccination. And humoral responses against SARS-CoV-2 reached its peak at day 28, and T-cell responses were noted from day 14 post-vaccination. Therefore, the Ad5 vectored SARS-CoV-2 vaccine is worthy of further study [22].

Besides the development of the Ad5 vectored SARS-CoV-2 vaccine, BBIBP-CorV, an inactivated SARS-CoV-2 vaccine is also under enlargement. BBIBP-CorV demonstrates high levels of neutralizing antibodies in mice, rats, pigs, guinea, rabbits, and nonhuman primates to protect against SARS-Co-V-2. Two doses (2 μg/ dose) of immunization of BBIBP-CorV show effective protection against the SARS-Co-V-2 intratracheal challenge in rhesus monkeys and antibody-dependent infection enhancement effect wasn't detected. Moreover, BBIBP-CorV presents a high efficiency and genetic stability for the production of the vaccine. Therefore, a clinical trial would be needed to further test the efficiency of BBIBP-CorV [21]. Additionally, researchers have been working on the development of the PiCoVacc, which is also an inactivated SARS-CoV-2 vaccine. This vaccine demonstrates neutralized antibodies in mice, rats, and nonhuman primates. These antibodies have neutralized 10 representative SARS-CoV-2 strains, which means that a possible wider ability of neutralization against other strains could take place. Using two different doses (3 or 6 μg/ dose) provided partially or completely protection against SARS-CoV-2 for nonhuman primates without visible antibody-dependent enhancement of infection. Therefore, these results support the clinical development and evaluation of PiCoVacc in humans [20].

Currently, There are no specific drugs to treat SARS-CoV-2, but a progressive development of vaccine has been done. The next step is to evaluate the safety and efficiency of them, which requires lots of time to prove. Nevertheless, prevention and control on the spread of the disease would be the priority task to do, as researchers have predicted that a second wave would come as early as possible in winter [23].

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Journal of Clinical and Nursing Research

Research Article

Discussion on Prevention and Treatment of Lower Extremity Deep Venous Thrombosis in Orthopedic Perioperative Period from Spleen and Stomach Meridians

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Abstract: Deep venous thrombosis of lower extremity is one of the common complications in orthopedic perioperative period. It is caused by many factors, such as peripheral vein dilation, slow blood flow, long-term immobilization, bed rest and so on. On the one hand, it affects the early postoperative functional exercise and functional recovery, on the other hand, it increases the length of hospital stay and economic burden, increases the pain of patients and even endangers their lives. Effective treatment of traditional Chinese medicine combined with western medicine can play a better role in the prevention and treatment of lower extremity deep venous thrombosis. This study expounds the concept of spleen and stomach meridians in the prevention and treatment of lower extremity deep venous thrombosis, and puts forward some opinions on the dialectical treatment and daily conditioning of lower extremity deep venous thrombosis, hoping to provide ideas for the clinical prevention and treatment of lower extremity deep venous thrombosis in traditional Chinese medicine.

Key words: Lower extremity deep venous thrombosis; Stomach meridian; Spleen meridian

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

Deep venous thrombosis (DVT) is a common complication in orthopedic surgery. Hypercoagulable state of blood, vascular wall loss and slow blood flow are the three elements of thrombosis. The clinical manifestations are local swelling, pain, erythema and skin pigmentation. In severe cases, it can cause pulmonary embolism[1]. With the increasing attention of clinicians and the improvement of diagnostic techniques, the incidence rate of DVT is increasing, and the rate of missed diagnosis is becoming less and less. The treatment of deep venous thrombosis of lower extremity includes anticoagulation, thrombolysis, surgery, interventional radiology and Chinese medicine treatment. The treatment of Western medicine for more than 3 months and even anticoagulation therapy in the end, the adverse reactions and financial burden caused by long-term medication are greatly affecting patients. Quality of life. Therefore, the effective treatment of traditional Chinese medicine is particularly important. Since ancient times, traditional Chinese medicine, especially acupuncture and moxibustion, plays an important role in the prevention and treatment of DVT.

The incidence rate of DVT is mainly postoperative, long-term bed rest, long-term use of contraceptives and pregnancy. But only 20-30% patients have standard symptoms and signs. Over 50% of patients lack clinical symptoms and signs. 50%-60% patients may have pulmonary embolism [2]. Therefore, clinicians should pay high attention to these diseases, which are high incidence, high missed diagnosis rate and high mortality. Accurate diagnosis and treatment, on the basis of venography and other diagnosis, can be combined with the physiological

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and pathological characteristics of patients with syndrome differentiation. After clinical observation and analysis, the author found that the incidence of DVT is closely related to the two meridians of spleen and stomach from the perspective of traditional Chinese medicine, and the clinical effect of treating the disease from the two meridians of spleen and stomach is obvious. By expounding the theory of the relationship between spleen and stomach meridians and DVT, this paper proves the important role of spleen and stomach meridians in the prevention and treatment of DVT, and provides theoretical basis and practical guidance for clinical treatment of DVT based on spleen and stomach meridians.

2 TCM understanding of deep venous thrombosis of lower limbs

In traditional Chinese medicine, DVT belongs to the category of "swelling", "edema", "blood stasis flowing", "blood stasis syndrome" and "pulse Bi". According to the records of "Bi lies in the pulse, blood coagulation does not flow". According to Tang Rongchuan's "blood syndrome theory", the following is true "Blood stasis retention is also swelling, which is the syndrome of blood changing into water", which was clearly named as "Guzhong" according to the diagnostic and curative effect standard of traditional Chinese medicine disease issued by the State Administration of traditional Chinese medicine in 1994. It is precisely because ancient doctors have no exact records on the etiology and pathogenesis of DVT, so the understanding of modern Chinese medicine on the etiology and pathogenesis of DVT is also different. Most doctors believe that DVT is caused by the interaction of "blood stasis", "deficiency", "dampness" and "heat", in which "blood stasis" is an important factor throughout the disease [4]. As for the etiology of DVT, some doctors put forward that the disease should be first asked about "Qi". Neijing says that "Qi is the commander of blood, and blood is the mother of Qi". Yilin Gaicuo also points out that "since the vitality is deficient, it must not reach the blood vessels. If the blood vessels have no Qi, they must stay and stasis". According to the theory of blood evidence, it is said that "smoothing the blood of human beings, smoothing the veins, filling the skin, and flowing without stagnation" is the way of following the meridians and its regular way. They think that postoperative patients often due to body deficiency and lead to disharmony of Qi and blood, Qi deficiency is blood stasis, so blood stasis block, vein obstruction. In addition, if you can't move or move too little for a long time after operation, it is easy to hurt Qi. "Nine needles of Lingshu" thinks that "lying for a long time can hurt Qi". If you keep lying for a long time, it can hurt Qi, Qi deficiency and blood stasis, and blood stasis can block the vein of lower limbs, which can also lead to DVT [5]. On the basis of deficiency of Qi and blood, some doctors put forward the important pathogenic factors of Ying Wei disharmony, such as Ying Wei imbalance, Ying Wei disharmony, Ying Wei disharmony, Ying Wei disharmony, Wei Wei disharmony, Xie Qi deficiency attack, so as to stay evil in the deficiency, blood stasis blocking the channels and become the disease [6]. It is considered that the disease is often characterized by deficiency of vital energy and excess of pathogenic factors, or a mixture of deficiency and excess. Some doctors put forward the theory of "spleen" for treatment. They think that how long does the patient stay in bed or think about injuring the spleen, the spleen loses its healthy transport, and the water and dampness transport is abnormal, and the dampness pathogen is injected into the vein of blood stasis [7]. It is pointed out in "Yizong Jinjian: key points of surgical mental method" that "excessive consumption of five spices will damage Qi and blood. If you hurt hunger and lose satiety, you will hurt the spleen and stomach. All these are the diseases caused by diet Improper diet and vegetarian pastry will damage the spleen and stomach, resulting in endogenous damp heat, flowing in the blood and causing the disease. Some scholars start from "Damp heat" and think that the obstruction of vein caused by damp heat accumulation and vein stasis is also one of the causes of the disease. In the early stage of the disease, the blood stasis is caused by excessive heat obstructing the blood vessels, because it is heat evil, the result is blood stasis; in the later stage of the disease development, although the heat evil is gradually disappearing, the syndrome of damp heat is still seen, and blood stasis becomes the main contradiction [8]. In a word, most doctors think that dampness, heat, blood stasis and deficiency are the main pathological basis of the disease, dampness heat and blood stasis are the main pathogenic factors, and blood coagulation vein

is the main pathogenesis of the disease.

3 Theoretical basis of spleen and stomach meridians in the treatment of lower extremity deep venous thrombosis

"On the origin of various diseases" pointed out: "blood and water phase, body fluid choking astringent, spleen and stomach weakness, water flow, become edema." It can be seen that weakness of spleen and stomach and exogenous pathogenic Qi will damage Yang Qi, and weak Qi will lead to weak blood promotion and fixation, resulting in abnormal blood operation. Therefore, swelling and edema can be seen, and blood stasis and water stagnation will also affect qi movement, resulting in obstruction of Yang Qi and unfavorable gasification. They interact with each other. "Qi and blood" in Medical Biography points out that Yang Qi is the guide of Yin blood and Yin blood is the return of Yang Qi. Therefore, traditional Chinese medicine treatment of DVT should be based on the relationship between Qi, blood and water [9], and achieve the effect of "qi circulation leads to blood circulation and blood circulation leads to water circulation" through the methods of Tonifying Qi, activating blood and promoting dampness.

"Lingshu • meridians" records that "the Yellow Emperor said: meridians, therefore, can determine life and death, deal with all kinds of diseases, adjust the deficiency and excess, and can not be blocked." It shows that meridians play a very important role in the diagnosis and treatment of diseases. The stomach meridian of Foot Yangming is the meridian of multi Qi and multi blood, which has the functions of Tonifying Qi and blood, regulating spleen and stomach, clearing heat and removing dampness. The spleen meridian of foot Taiyin is the meridian of more blood and less Qi, which has the functions of transforming water and dampness, regulating qi and detumescence, tonifying deficiency, dispersing cold and clearing heat. They are closely related and inseparable [10]. The spleen and stomach meridians can prevent and treat DVT through the following ways

3.1 Invigorating qi and activating blood circulation to dredge collaterals

"Qi is the commander of blood". Qi can produce blood, but also can do it. On the one hand, the material basis of blood is essence, and the promotion of essence to blood depends on the biochemical function of Qi; on the other hand, the promotion of Qi can make blood circulate in the pulse again and again. [11] "On blood syndrome" says: "the person who transports blood is Qi." Through the gasification and promotion of Qi, the nutrition in the diet is transformed into fine substances, and the generation and operation of blood are promoted. "Blood is the mother of Qi" clarifies that blood is the carrier of Qi. Without blood as the carrier, Qi can not run, and blood can also be angry. The stomach meridian and the spleen meridian are both the foundation of postnatal development. They are the main source of nutrients needed for postnatal development, and also the main material basis for generating Qi and blood. They all depend on the transportation function of the spleen and stomach. Therefore, the acupoints of the spleen and stomach meridian can supplement the deficiency of Qi and blood. When the acupoints of Qi and blood are selected, the purpose of Invigorating Qi and promoting blood circulation is achieved.

3.2 Clearing away heat and dampness to remove blood stasis

"Yilin Shengmo • Volume I • dampness" says: "the treatment of dampness ignores the spleen and stomach, not its treatment." The spleen likes dryness but abhors dampness. If the dampness is blocked for a long time and damages the spleen yang, the Qi will not turn into water, and the dampness pathogen will be more abundant. After fracture surgery, the patient will stay in bed for a long time, think about it, damage the spleen and stomach, and the spleen will lose its healthy circulation. If the movement and transformation are abnormal, the dampness pathogen will flow into the blood and develop the disease; or the healthy qi will be damaged, and the dampness and heat pathogen will take the opportunity to invade the blood and torment the blood to form congestion [13]. Stimulating stomach meridian can stimulate Yangming Meridian Qi, conduct directly to spleen and stomach, regulate spleen and stomach transportation, so as to achieve the effect of diuresis and dampness. Stimulating the spleen meridian can replenish deficiency and Yin to clear away heat. For excess heat, cathartic method can be used to stimulate the acupoints of the two meridians to expel the evil heat. Based on promoting blood circulation

and removing blood stasis, acupoints are selected according to the syndrome differentiation of the two meridians to regulate the spleen and stomach, help healthy qi, clear away heat and dampness. In other words, deficiency can replenish qi and Xing, but in fact, it can unblock Qi and Shu, so as to make blood stasis and collaterals smooth and smooth, and Qi and blood flow smoothly.

3.3 Yangming is the only treatment for impotence

It is pointed out in Su Wen Wei Lun that "deficiency leads to flaccidity of the pulse, pivot folding and pulling out, tibia longitudinal but not to any place." That is, in clinical practice, lower limb muscle atrophy and weakness, tibia weakness, inability to stand, knee and ankle joint flexion and other symptoms, due to lower limb blood deficiency; or because too much blood loss leads to vein deficiency, unable to nourish muscles and joints, DVT belongs to the category of pulse flaccidity [14]. The word "Duqu" in "treating flaccidity by taking Yangming alone" emphasizes the unique role of stomach meridian in flaccidity, and using "Qu" does not need "bu", which indicates that the stomach meridian of Foot Yangming has the function of "regulating its deficiency and excess, and reversing its smoothness", including both deficiency and supplement, and eliminating evil. If the spleen and stomach are deficient and the Qi and blood are insufficient, it is necessary to strengthen the spleen, replenish qi and replenish the middle; if Yangming passes through excess and dampness and heat accumulate in the spleen, it is necessary to clear away heat, remove dampness and strengthen the spleen. If the stomach meridian is full, the Qi and blood are sufficient, so the meridians can be nurtured, the muscles and veins are soft, and the veins run smoothly. The effect of preventing and treating DVT can be achieved by nourishing the stomach meridian and filling the blood vessels [15].

4 TCM diagnosis and treatment ideas

(1) Diagnosis: limb swelling, pain and superficial varicose veins are the three major symptoms of DVT. However, because many patients are asymptomatic or atypical in clinic, it is easy to miss diagnosis and misdiagnosis. Therefore, we should make a comprehensive judgment according to the DVT diagnosis and treatment guidelines. Whether the clinical manifestations are typical or not, we need further laboratory examination and imaging examination to make a definite diagnosis. Ultrasound is the first choice for patients with obvious thrombogenic factors and typical symptoms and signs. When the patient had no obvious cause of thrombosis, atypical symptoms and signs, and Wells score was low-grade possibility, blood D-dimer test was performed. If the patient was negative, thrombosis was excluded. If the patient was positive, further ultrasound examination was performed. In addition, the patient's past medication history and history of DVT were also asked, because 10% of the patients relapsed within one year after the first onset [16]. (2) Treatment principle: it is said in Suwen Tiaojing Lun that "all diseases have deficiency and excess". The differentiation of symptoms and signs of DVT should also be based on the principle of deficiency and excess, treating the symptoms in case of emergency and treating the root cause in case of delay. (3) Treatment by stages: in the early stage, it is mainly based on excess, and it is urgent to eliminate pathogenic factors, focusing on clearing away heat and dampness, promoting blood circulation and removing blood stasis; in the remission stage, it is mainly based on deficiency, and it is mainly based on tonifying qi and blood and nourishing venation. Acupoints: futu, Liangqiu, Xuehai, Zusanli, yinlingquan, Shangjuxu, Fenglong, xiajuxu, Sanyinjiao, JieXi [17]. Prescription: Zusanli can regulate the spleen and stomach. It is mainly used for the treatment of spleen and stomach dysfunction, deficiency of biochemical source of Qi and blood, resulting in blood stasis caused by empty blood sea. Clinically, according to the specific situation, it can be reduced or supplemented to make the stomach smooth, so that the spleen and stomach can be transported normally, and the blood stasis can be cured if the Qi and blood are exuberant. And modern research shows that Zusanli can reduce fibrinogen and fibrinogen degradation products and prevent blood coagulation [18]. Blood Sea treatment of blood syndrome in the "acupuncture A and B classics" records: "if the blood is blocked, inverse Qi inflation, blood sea master." Modern studies have proved that acupuncture at Xuehai can significantly improve the hemorheology, coagulation and other indicators of patients with blood stasis syndrome, indicating that Xuehai can promote blood circulation, improve microcirculation, regulate metabolism and improve

the body function [19]. Yin Ling spring is selected to clear away dampness and heat, dredge channels and activate collaterals, and Sanyinjiao is used to ventilate and guide stagnation, so as to eliminate rheumatism in channels and collaterals. JieXi is the meridian fire point of the Foot Yangming Meridian, and it is also the mother point of the stomach meridian. According to the method of Tonifying the mother point when deficiency occurs, JieXi has the function of Tonifying the stomach deficiency, and can also be used to clear and reduce stomach fire and dredge Yangming Meridian Qi [20]. Futu acupoint can remove dampness and arthralgia, relieve pain and activate blood circulation. Liangqiu acupoint has the effect of activating yang and arthralgia, activating blood circulation and activating collaterals, which can promote lower limb blood circulation and reduce edema. Fenglong, Shangjuxu and xiajuxu have the effects of regulating qi and relieving pain, resolving phlegm and removing dampness, relaxing muscles and activating collaterals. (4) Daily care: for the prevention of DVT, it should be required to raise the affected limb, forbid the separate pillow under the popliteal fossa and lower leg; quit smoking and drinking; do more deep breathing and coughing; encourage the patient to take the initiative to get out of bed as soon as possible; keep the stool unobstructed, eat more cellulose rich food; pay attention to the patient's chief complaint, if the patient has a feeling of heavy and swelling pain after standing, it should be warned of deep venous blood The possibility of thrombus formation. For patients with DVT, we require them to rest in bed for 10 ~ 14 days, raise the affected limb for 20 ~ 30 degrees, brake, prohibit massage, hot compress, physical therapy and do strenuous exercise, avoid forced defecation, so as to avoid embolus falling off and pulmonary embolism. The swelling degree of lower limbs, skin temperature, color and pulse of dorsalis pedis artery were observed daily, and the circumference of different planes of affected limbs were measured and recorded daily to judge the curative effect [21].

5 Typical cases

In the treatment of DVT, we should take dredging collaterals as the basic principle, focus on "blood stasis", and take invigorating qi and activating blood circulation as the main method [22]. However, we should carefully figure out the etiology and pathogenesis, carry out detailed syndrome differentiation and treatment for the patients, and achieve the effect of dredging collaterals in combination with Supplementing Qi, invigorating blood, strengthening spleen to strengthen the body, or clearing away heat and dampness to remove pathogenic factors. DVT usually occurs first in the deep gastrocnemius vein, and extends upward to the femoral vein and iliac vein. The route of foot Taiyin spleen meridian in the lower limbs is roughly the same as that of DVT prone vein, and the route of Foot Yangming stomach meridian is also close to DVT prone vein. Clinically, on the one hand, acupoints can be selected dialectically, on the other hand, acupoints play a role in the near treatment. Therefore, for the prevention and treatment of DVT, the selection of spleen and stomach meridians can achieve better curative effect.

A 86 year old male patient complained of "falling to the left hip swelling and pain for one day". He went to the outpatient department of our hospital on September 3, 2019. After the outpatient doctor inquired about the medical history, physical examination and film reading, he was admitted to the hospital with the diagnosis of "left intertrochanteric fracture". After actively improving the preoperative examination and eliminating the surgical contraindications, he underwent "PFNA for closed reduction of left intertrochanteric fracture" on September 6, 2019 After the operation, the patients continued to receive rehabilitation treatment in our hospital. Symptoms: moderate shape, left hip sterile dressing in good condition, mild swelling of the left lower limb, slightly dark skin color of the left lower limb, slightly high skin temperature, tenderness (+), limited activity, abdominal distension, abdominal pain, acceptable, general sleep, normal urination, unexplained stool. The tongue is dull, the fur is white and greasy, and the veins under the tongue are tortuous and smooth. Laboratory examination: blood cell analysis: lymphocyte ratio 6.40%, neutrophil ratio 83.20%, lymphocyte number 0.51 * 10 ^ 9 / L, monocyte number 0.73 * 10 ^ 9 / L9, red blood cell 2.69 × 10 ^ 12 / L, neutrophil number 6.65 × 10 ^ 9 /50. The results showed that the erythrocyte sedimentation rate (ESR) was more than 4.9 UG / L, and the fibrinogen degradation rate was more than 4.9 UG / L. Auxiliary examination: ultrasound (left lower

extremity artery and vein) showed that the internal diameter of the intramuscular vein of the small leg of the left lower extremity widened, tortuous widened, the wider part was about 7.6 mm, and flocculent echo could be seen in the lumen. CDFI: a small amount of blood flow signal can be seen. Diagnosis: femoral swelling (blood stasis and dampness syndrome). Acupoints: Fu Tu, Liang Qiu, Xue Hai, Zusanli, yinlingquan, Shangjuxu, Fenglong, xiajuxu, Sanyinjiao, Ashi, etc. Treatment: after needling Deqi, the needle handle was applied with 2 cm moxa stick for warm acupuncture, once 30 minutes, once a day. 10 days is a course of treatment. Low molecular weight heparin calcium injection, twice a day, and other conventional treatment. Ask patients to raise the affected limb, avoid knee pillow, avoid local massage, massage, light diet. In the second diagnosis (September 18, 2019), the patient's lower limb swelling and pain were alleviated, the left dorsalis pedis artery was palpable, the movement of each toe was normal, the peripheral blood supply was good, and the skin feeling was normal. NACO, normal urination, fair stool, once a day, pale tongue and white pulse. The patients were asked to take proper functional exercise, light diet and smooth emotions, and the rest of the treatment remained unchanged.

According to: the patient's spleen and stomach were injured after operation, the spleen and stomach were not healthy, and the water was wet downward. In addition, the patient had to stay in bed for a long time to brake, and the Qi was injured for a long time. The Qi deficiency resulted in blood stasis, which combined with the dampness and invaded the lower extremities, resulting in swelling and pain of the lower extremities. Patients with abdominal distension, abdominal pain, stool is not solved, easy to lead to increased intra-abdominal pressure, affect the lower extremity venous blood flow. "Lingshu Ben Shu" records: "all intestines belong to the stomach." It shows that the stomach and intestines and intestines interact with each other in physiology and pathology. Adjusting the Foot Yangming Meridian can also treat the diseases of intestines and intestines. Therefore, selecting the acupoints of the two meridians, one can promote hydration and dampness, invigorate Qi and activate blood circulation, the other can regulate the Qi in the large intestine, and the conduction function of the large intestine will return to normal. In the treatment, electroacupuncture, warm acupuncture, directional penetration of medicine and acupoint application can be used to improve the curative effect and relieve the symptoms as soon as possible. In the process of treatment, the patient's cooperation and compliance with the doctor's advice are also required to achieve good results.

6 Conclusion

On the one hand, long-term bed rest after fracture surgery, long-term supine, excessive rotation, traction of lower limbs and anesthesia make the peripheral vein dilate, which cause venous blood flow stagnation, especially in deep femoral vein and iliac vein, resulting in blood stasis and thrombosis. On the other hand, it leads to qi stagnation or dampness stagnation in the spleen, which leads to blood stasis and qi stagnation. Most doctors' understanding of the etiology and pathogenesis of DVT can be summarized as Qi deficiency and blood stasis. It is believed that qi deficiency leads to blood deficiency, Qi deficiency leads to blood stasis, Qi's gasification and promotion can't play a normal role, and blood can't run smoothly in the vein. Therefore, the main purpose of the treatment of this disease is to invigorate Qi and activate blood circulation, remove blood stasis and dredge channels [23]. In the clinical practice of prevention and treatment of DVT, the use of spleen and stomach meridian dialectical acupoint treatment has been widely recognized. Based on the ancient literature review and teaching experience, the author draws a conclusion that the prevention and treatment of DVT is not only the effect of acupoints, but also the effect of clearing away heat and dampness, tonifying qi and promoting blood circulation of spleen and stomach meridians through dialectical treatment. The stomach meridian of Foot Yangming and spleen meridian of foot Taiyin are the meridians with more Qi and more blood and less Qi, while the cause of DVT is deficiency, blood stasis and the interaction of dampness heat and stasis. Acupuncture and massage of spleen and stomach meridian points can regulate qi and blood, clear dampness and heat, and play an important role in the prevention and treatment of DVT. At the same time, we also need to understand that it is difficult to achieve good curative effect by taking a single therapy in clinic, so we can not ignore the important role of internal treatment of traditional Chinese medicine. We should uphold

the concept of internal and external treatment, and combine traditional Chinese and Western medicine to provide better and safer treatment methods for patients. With the development of modern medicine, we should have the spirit of inclusiveness, absorb foreign excellent ideas and advanced technology, and "use the West for the middle", so as to continuously improve the clinical curative effect, reduce the suffering of patients, and reduce social medical costs.

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Journal of Clinical and Nursing Research

Research Article

Research on Government Emergency Management Strategy Based on Public Health Incidents

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Abstract: It is the government's basic responsibility to ensure public health safety. However, due to the influence of the environment and human beings, some public health incidents are still inevitable, endangering public health and undermining social stability. However, any public health incident is traceable, and there will be a process from latent period to outbreak. Therefore, the government needs to grasp the key points of health incidents, strengthen emergency management, and ensure social stability and public safety.

Keywords: Public health incidents; Government emergency management; Problems; Strategies

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

In early 2020, the COVID-19 pandemic has spread rapidly throughout the world. Although China has quickly controlled the domestic spread, the epidemic trend of the virus is still not to be underestimated. This sudden public health incident has given people all over the world a lesson in public health and raised the government's attention on public health incidents. However, judging from the current management of public health incidents in China, it still has not achieved adequate results and it is necessary to continue to sum up the experience and learn from the excellent public health emergency management systems of some countries to achieve effective emergency response and management for public health incidents.

2 The Current State of Government Emergency Management of Public Health Incidents

2.1 Inadequate Early Warning System for Public Health Incidents

Judging from the structure of the emergency management system for public health incidents in China, the response speed of relevant departments is relatively slow, disease prevention is not adequate, and the defense capabilities against public health incidents are insufficient. From the perspective of the prevention of the novel coronavirus in Wuhan, it took more than a month from the appearance of the first patient to the lockdown of Wuhan. There was insufficient crisis awareness and no timely response[1]. As a result, the golden period of prevention and control for the pandemic was missed, and a large-scale outbreak occurred. Moreover, the lack of timely information release has led to a weak sense of participation among the people. This shows that the efficiency of emergency management in China still needs to be improved.

2.2 Shortage of Emergency Response Personnel for Public Health Incidents

Judging from the prevention and control of public health incidents in recent years, talents with a solid theoretical foundation and practical ability play an important role in the health system. Chinese government departments have begun to strengthen the building of public health talents, but from the current state of public health talents building, there is still a phenomenon of "false saturation". The reason for this is that China's public health investment is relatively small and the incidence of public health issues has

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increased under the historical background of the population aging, and the handling of health incidents has become more difficult. Meanwhile, the theoretical knowledge of many talents is not solid, the practical experience is not extensive, and the emergency response capability is insufficient, which makes it impossible to deal with the emergency public health safety incident scientifically.

2.3 The Early Warning System for Public Health Incidents is not Adequate

The reporting format of public health incidents in China is hierarchical reporting. However, due to the scattered information and the phenomenon of departmental monopolies, it is difficult to quickly summarize and manage a crisis as it unfolds. Therefore, problems such as information misreporting and underreporting often occur during information collection, resulting in insufficient information control and utilization. Meanwhile, from the perspective of command and decision-making, there is no effective nation-wide interconnected monitoring and early warning mechanism, which has led to a reduction in the early warning capability of the public health system[2]. In addition, the health management department has not established an adequate cooperation mechanism with the media, resulting in imperfect information release, and the public cannot keep abreast of the real-time development of public health incidents.

3 Government Emergency Management Strategy for Public Health Incidents

3.1 Build an Effective Emergency Response Plan for Public Health Incidents

Many public health incidents have a latent period. Therefore, it is particularly important to build an adequate prevention mechanism and pre-planning mechanism. Only by making preparations can the risks be effectively eliminated. In formulating the early warning system for public emergencies, it is necessary to start with the entire process and all elements of public health emergency management to ensure the comprehensiveness and consistency of the system. First of all, in the building of the emergency management system, it is necessary to adopt the one-case three-system structure and improve it on the original basis to enable all organizations in the management of public health incidents from central to local level to comprehensively implement and carry out emergency plans in all directions. All government departments need to do their own work in line with the functions of the emergency plan management mechanism, and strengthen the legal norms of the public health emergency response plan to ensure that there are theoretical and legal basis for the specific implementation process. Meanwhile, the government needs to organize relevant departments to do a good job in the integration of routine work and emergency preparedness, and do a good job in the whole process of drilling, including emergency rescue material supply, emergency rescue team building, and emergency industry response. Through continuous publicity and drills, improve the safety awareness of all units, departments and individuals. In addition, it is also necessary to do a good job in cultivating the public's common sense and skills in public health incidents, and promote the improvement of the emergency management system for public safety incidents in China.

3.2 Refine the Early Warning Mechanism during the Evolving Period of Public Health Incidents

After public health incidents started to gradually become threatening, government departments need to take immediate response and measures to determine the incident indicators according to the evolving characteristics of the incidents. In the building of a public health emergency management system, it is first necessary to build an adequate crisis early warning system. Through long-term professional research, China's public health departments have gradually developed certain risk and crisis response capabilities and measures. It is necessary to take routine response as the basis to get hold of the nodes of incident progress and select effective solutions[3]. Meanwhile, do a good job in popularizing emergency response early warning to the outside world, and communicate the public health early warning mechanism to all groups of the society in a way that is acceptable and comprehensible by the public, so that the public can choose a reasonable emergency response plan. In addition, guide grassroots organizations to make emergency preparations, select special personnel to perform risk assessment on the situation of their departments and units, discover and report risks and problems in a timely manner;

and publicly release emergency warning information to the public. The government grants the authority to the corresponding authority to release the most acceptable and comprehensible information content to the public, to mobilize the entire society, to jointly deal with public health incidents, and to cut off the source of proliferation.

3.3 Do a Good Job in Emergency Handling and Mobilization of Public Health Incidents

Once a public health incident has entered the full-scale outbreak period, it indicates that the preliminary work has not achieved good results and the situation has expanded. The main strategy of the government at this stage is to mobilize all the people and units to carry out emergency response and reduce the harm and impact of the public health incident. First of all, organize various departments to carry out response work in accordance with the emergency plan drill for public health incidents. The key issue in handling the situation is the need to adopt a corresponding response system based on the level of the public health incident, and regulate the command authority and the level of resource mobilization etc. on the scene. Secondly, do a good job in the reasonable allocation of emergency response resources. After a public health safety incident enters the outbreak period, there is often a shortage of emergency response resources, such as medical protective clothing, masks, and medical personnel in the COVID-19 pandemic. The effective allocation of emergency response resources can effectively alleviate various problems in public health incidents. Therefore, local governments need to configure emergency supplies in accordance with the response level of the emergency. Once the emergency response is initiated, the government department must actively gather supplies, and do a good job in accurately distributing supplies. In addition, the government needs to do a good job in risk communication with the outside world, and release true and objective information to the stakeholders of public health incidents and the public to prevent rumors from causing greater social problems. Once a public health incident breaks out, many people will behave abnormally out considerations for their own health. In response to these problems, government departments need to communicate with each other so that relevant personnel can adopt correct rules and do a good job of self-protection while not causing the expansion of infection zone. In addition, while publicizing accurate information, it is also necessary to control rumors to play the correct role in guiding public opinion.

3.4 Emphasize the Social Security during the Receding Period of Public Health Incidents

After a public health incident got controlled, it gradually enters a period of receding. The most intense emergency response work has ended at this stage, but it does not mean that the entire process is over. The process of the receding period is relatively long and the social impact still exists, therefore professional work is needed to reset the trauma of the society and communities. First of all, the government needs to provide corresponding compensation and continue treatment for victims of direct casualties or family members in the public health incident; Secondly, for people who suffered psychological harm in public health incidents, such as on-site medical staff, patient family members, police personnel involved in rescue and treatment, and some of the people, these people faced a large number of concerted deaths during the rescue and treatment process, and close contact with the virus at all times can easily cause psychological harm. Therefore, psychological interventions can be carried out on this part of the population; in addition, corresponding subsidies should be provided for companies and individuals that have suffered major losses due to public health incidents and low-income groups or homeless people. In short, the post-incident reconstruction work cannot be taken lightly, and the emergency response mechanism should be strengthened based on current situation.

4 Conclusion

In conclusion, public health incidents are relatively harmful to the society and pose certain threats to the safety of the people and social stability. Therefore, the government must be able to respond in a timely manner to prevent and control public health incidents in advance, exert control during the incident, and carry out aftercare and reflection after the incident to ensure the continuous improvement of public health emergency management.

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Journal of Clinical and Nursing Research

Research Article

Effect of KAP Intervention Model on Resilience and Cancer-related Fatigue in Patients with Colorectal Cancer Undergoing Chemotherapy

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Abstract: ***Objective:*** To explore the effect of KAP intervention mode on resilience and cancer-related fatigue in patients with colorectal cancer undergoing chemotherapy. ***Methods:*** A prospective randomized trial was conducted. 55 patients with colorectal cancer who received routine nursing from February 2018 to February 2019 were included in the control group, and 55 patients who received routine nursing + KAP intervention from March 2019 to March 2020 were included in the observation group. The scores of Resilience Scale and cancer-related fatigue scale (CFS) before and 6 months after intervention were compared between the two groups. ***Results:*** After 6 months of intervention, the score of resilience of the two groups was higher than that before intervention, and that of the observation group was higher than that of the control group, the difference was statistically significant ($P < 0.05$); The CFS score of the two groups was lower than that before intervention, and that of the observation group was lower than that of the control group, the difference was statistically significant ($P < 0.05$). ***Conclusion:*** KAP intervention model can improve the resilience of patients with colorectal cancer chemotherapy, reduce cancer-related fatigue.

Key words: Colorectal cancer; Knowledge, attitude and practice model; Psychological flexibility; Cancer related fatigue

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

Surgical resection and chemotherapy are often used in the treatment of colorectal cancer in order to improve the clinical symptoms such as bloody stool and change of defecation habits, and prolong the survival period of patients. However, due to the fear of cancer and the side effects of chemotherapy drugs, patients often feel physically and mentally tired and lose confidence in treatment, so effective measures should be taken as soon as possible. Knowledge attitude practice (KAP) intervention mode mainly through knowledge, belief and behavior and other aspects of intervention, gradually change patients' uncertain behavior, so as to develop healthy behavior[1]. In order to promote the rehabilitation of patients, this study mainly discusses the effect of KAP intervention mode on psychological resilience and cancer-related fatigue of patients with colorectal cancer chemotherapy. It is shown as follows.

2 Material and methods

2.1 General information

This study was approved by the medical ethics committee of our hospital [2018 s (095)]. 55 patients with colorectal cancer who received routine nursing from February 2018 to February 2019 were included in the control group, and 55 patients who received routine nursing + KAP intervention from March 2019 to March 2020 were included in the observation group. There were 32 males and 23 females in the observation group; The average age was (45.32 ± 3.77) years old; The course of disease was 1-2 years,

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with an average of (1.53 ± 0.17) years; Location of the lesion: There were 33 cases of colon and 22 cases of rectum. There were 34 males and 21 females in the control group; The average age was (45.81 ± 3.83) years old; The course of disease was 1-2 years, with an average of (1.55 ± 0.18) years; Location of the lesion: There were 35 cases of colon and 20 cases of rectum. The general data of the two groups were comparable ($P > 0.05$).Patients and their families voluntarily signed informed consent.

2.2 Inclusion criteria

(1) inclusion criteria: According to the diagnostic criteria of colorectal cancer in Chinese code for diagnosis and treatment of colorectal cancer[2]; The cognitive ability is normal, with reading and writing ability; The estimated survival time was more than 6 months. Exclusion criteria: combined with other malignant tumors; Complicated with cardiopulmonary dysfunction; The patients were treated with related drugs one month before chemotherapy.

2.3 Method

2.3.1 The control group

Routine nursing intervention: nursing staff simply popularize knowledge of colorectal cancer disease for patients; Give medication and later treatment guidance; Telephone follow-up once a month to understand the patient's condition, ask the patient to review regularly, and continue to intervene for 6 months.

2.3.2 The observation group

KAP intervention mode was adopted on the basis of the control group: a KAP intervention group was established, consisting of the head of the department, the head nurse and 3 responsible nurses. After meeting and discussion, the group members developed targeted measures according to the patient's condition. The head nurse and department director are responsible for giving professional guidance and training to the responsible nurses, and providing targeted nursing for patients after passing the assessment. The details are as follows:(1) Strengthen knowledge education. Arrange lectures on colorectal cancer knowledge, invite oncology experts to explain the etiology, treatment and prognosis of colorectal cancer, and answer questions from patients and their families; The nursing Manual of colorectal cancer was issued, and related health education articles and videos were pushed to patients through wechat platform every day to improve their disease awareness. (2) Build faith: Encourage patients to explain their psychological demands, and suggest their families to accompany patients more; Explain the doubts of patients, list successful treatment cases, and increase the patients' belief in conquering the disease; Guide patients to use appropriate methods, such as deep breathing, listening to music, muscle relaxation, etc., to transfer patients' anxiety.(3) Reinforcement behavior: To guide patients to carry out reasonable aerobic exercise, including walking, broadcast gymnastics, Taijiquan, etc., with the patient's maximum tolerance, 90 minutes each time, 5 times a week; And weekly through wechat to guide patients' medication, diet, colostomy care, etc., encourage patients to adhere to self-care, and instruct patients' families to supervise their implementation. The intervention lasted for 6 months.

2.4 Evaluation index

Mental resilience: Mental resilience scale[3] was used to evaluate the psychological changes of the two groups, including three dimensions of resilience, self-improvement and optimism. There were 25 items in total, and each item was scored according to the 1-4 grading method with a total of 100 points. The higher the score, the better the mental resilience. Cancer related fatigue: Cancer fatigue scale (CFS) [4] was used to evaluate the three dimensions of physical fatigue, emotional fatigue and cognitive fatigue, with 15 items in total. Each item scored 0-4, and the total score was 0-60. The higher the score, the more serious the cancer-related fatigue.

2.5 Statistical methods

SPSS 24.0 software was used to process data. to represent measurement data. Independent sample t-test was used between groups, paired sample t-test was used within groups, and count data was expressed as%. χ^2 test was used. $P < 0.05$ was considered as statistically significant.

3 Results

Before intervention, there was no significant difference in resilience and CFS score between the two groups ($P > 0.05$); After 6 months of intervention, the elasticity score of the two groups was higher than

that before intervention, and the observation group was higher than that of the control group, the CFS score of the two groups was lower than that before intervention, and the observation group was lower than that of the control group, the difference was statistically significant ($P < 0.05$).See Table 1.

Table 2. Comparison of resilience and CFS scores between the two groups ($\bar{x} \pm s$, points)

Time	Group	Resilience score	CFS score
Before intervention	Observation group (n = 55)	56.31±4.56	38.74±3.67
	Control group (n = 55)	56.33±4.57	39.16±3.71
	t	0.023	0.597
	P	0.982	0.552
The intervention lasted for 6 months	Observation group (n = 55)	73.99±5.63[a]	25.68±2.75[a]
	Control group (n = 55)	63.10±5.31[a]	22.38±1.56[a]
	t	10.436	7.741
	P	<0.001	<0.001

Note: Compared with the same group before intervention, [a]$P < 0.05$

4 Discussion

Patients with colorectal cancer are prone to fear, tension and other negative emotions under the influence of disease torture and side effects of chemotherapy drugs, and lose confidence in treatment, which affects the recovery of the disease. Therefore, effective nursing intervention for patients with colorectal cancer chemotherapy is particularly important.

KAP intervention mode improves patients' belief in treatment by increasing patients' cognition of disease, and actively adopts healthy behaviors under the guidance of belief, so as to achieve the purpose of promoting patients' rehabilitation[5]. The results showed that after 6 months of intervention, the resilience score of the observation group was higher than that of the control group, suggesting that KAP intervention model can improve the resilience of patients with colorectal cancer chemotherapy. The reason is that the KAP intervention group can improve the patients' awareness of the disease by arranging expert lectures, distributing brochures and wechat push.

The results of this study showed that the CFS score of the observation group was lower than that of the control group after 6 months of intervention, suggesting that KAP intervention mode can improve cancer-related fatigue in patients with colorectal cancer chemotherapy. The reason is that cancer-related fatigue can lead to physical and mental fatigue, make patients give up treatment, which is not conducive to the recovery of patients. KAP intervention mode can deepen patients' cognition of colorectal cancer, improve patients' confidence in treatment, and help patients establish awareness of healthy behavior through various forms of targeted education; Guiding patients to exercise reasonably, and guiding medication and nursing through wechat, family supervision and encouragement can strengthen patients' health behavior and reduce cancer-related fatigue.

In conclusion, KAP intervention model can improve the psychological resilience of patients with colorectal cancer chemotherapy and reduce cancer-related fatigue.

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Journal of Clinical and Nursing Research

Research Article

Research of the Clinical Effect of Kyphoplasty in the Treatment of Multiple Senile Osteoporotic Spinal Fractures

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Abstract: ***Objective:*** To evaluate the clinical effect of kyphoplasty in the treatment of multiple osteoporotic vertebral fractures in the elderly. ***Methods:*** The duration of the study was selected from January 2018 to December 2020, and 38 patients with multiple osteoporotic spinal fractures were selected for study evaluation. All patients were treated with kyphoplasty. The clinical indicators of the two groups were compared and analyzed. ***Results:*** The total effective rate was 94.7% and the complication rate was 5.3%. The height of midline, anterior and posterior vertebral body, Cobb angle, VAS score, ODI score and ADL score of 38 patients before and after treatment were compared, which were significantly better than those before treatment ($P<0.05$). ***Conclusion:*** The clinical effect of kyphoplasty in the treatment of elderly patients with multiple osteoporosis is significant, which can be promoted in all levels of medical institutions.

Keywords: Kyphoplasty; Osteoporosis; Spinal fracture

Publication date: January, 2021

Publication online: 31 January, 2021

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1 Introduction

The elderly are affected by age and other factors, multiple organ failure, physiological function gradually weakened, mostly accompanied by osteoporosis[1]. Osteoporosis in the elderly can lead to a significant reduction of bone mass, damage of micro bone tissue structure, increase of bone fragility, and increase of fracture incidence. The incidence rate of spinal fractures is high in elderly patients with osteoporosis. Such fractures are critically ill, with high disability and mortality rate, and poor prognosis. Therefore, we should take symptomatic treatment plan in time according to the fracture condition of patients[2]. Kyphoplasty is a new scheme for the clinical treatment of multiple osteoporotic spinal fractures in the elderly. There is no targeted evaluation study on its clinical application effect[3]. This study summarized and analyzed the basic clinical research data of patients in our hospital, and studied and analyzed the related problems of kyphoplasty.

2 Material and methods

2.1 General information

The duration of the study was selected from January 2018 to December 2020, and 38 patients with multiple osteoporotic spinal fractures were selected as the study evaluation samples. All patients were diagnosed as spinal fractures by CT and other imaging examination and clinical symptom analysis, without infectious diseases and liver and kidney diseases, and agreed to participate in the study. The basic clinical data of 38 patients were collected and evaluated. There were 21 males and 17 females, with an average age of (71.29 ± 5.08) years ranging from 65 to 77 years, and an average duration of (1.55 ± 0.48) months ranging from 5 days to 3 months. There were 15 cases of 2 vertebral bodies, 13 cases of 3 vertebral bodies, and 10 cases of 4 vertebral bodies.

2.2 Methods

38 patients were treated with kyphoplasty, the anesthesia scheme was general anesthesia, the doctor

adjusted the patient's position to prone position. Percutaneous puncture was performed by C-arm fluoroscopy, and the balloon was properly placed through bilateral pedicle region.Adjust the patient's position to make the vertebral lamina parallel to the X-ray projection direction. In the normal position, the bilateral pedicle of spinal canal is completely symmetrical, and the distance between spinous process and bilateral pedicle of spinal canal is consistent.When the puncture needle was used, the tip of the needle should reach the upper edge of the pedicle shadow.The C-arm machine was adjusted to the lateral position, the core needle was inserted, and the needle tip was placed in the middle line of the pedicle shadow in the positive position.Adjust to lateral display, drill in the puncture needle, and stop the operation after continuously drilling in the puncture needle for 3 mm, so that the needle tip is inserted into the posterior wall area of vertebral body. In the positive display state, the needle tip position needs to reach the inner edge area of pedicle shadow. The inner core of the puncture needle was drawn out and the guide needle was placed in a standardized way. The distance between the front end of the working cannula and the anterior area of the posterior cortex of the vertebral body was controlled to be 3 mm. In the lateral position, the drill should reach 1/2 of the vertebral body. In the normal position, the drill should not exceed 1/2 of the connecting line between spinous process and pedicle. The balloon was placed in the anterior 3/4 position after lateral drilling. The syringes were properly connected and bilateral balloon dilation was performed. The fracture reduction and balloon dilation were observed in detail. If the effect of fracture reduction was good or the balloon dilated to the cortical area around the vertebral body, the compression could be stopped. After the balloon was taken out, the bone cement was injected. During the operation, C-arm fluoroscopy was used to observe. If the bone cement tended to overflow the vertebral body, the injection should be stopped. After the bone cement is completely solidified, the working cannula can be taken out, and the puncture site can be disinfected and sutured after the operation.

2.3 Evaluation criteria

The total effective rate of 38 patients was evaluated, and the relevant criteria were set as disappearance of clinical symptoms, normal vertebral height and normal spinal activity. The effective related criteria were clinical symptom relief, significant increase of vertebral height, mild limitation of spinal activity, and invalid in other cases. The patients evaluated as markedly effective and effective were all effective. The incidence of postoperative complications in 38 patients was analyzed.

The height of midline, anterior edge, posterior edge and Cobb angle of 38 patients before and after treatment were compared. The VAS score, ODI score and ADL score of 38 patients before and after treatment were compared. The VAS score was pain score, the score was 0-10 points, and the score was proportional to the degree of pain.ODI score was Oswestry disability index, the score was 0-50, and the score was directly proportional to the degree of dysfunction. Barthel score was used to evaluate ADL, with a score of 0-100, and the score was directly proportional to ADL.

2.4 Statistical methods

SPSS 23.0 software was used to calculate all kinds of data. In this study, the measurement data was ($\bar{x} \pm s$), the test method was t, the count data was (%), and the test method was χ^2. If $P < 0.05$, there were differences between groups.

3 Results

3.1 Evaluate the total effective rate and complication rate of 38 patients

The mean operation time was (58.83 ± 2.76) min (42-78 min), the mean intraoperative blood loss was (42.28 ± 3.09) ml (36-59 ml), the mean bone cement injection was (5.08 ± 1.22) ml (4-7 ml), and the mean postoperative hospital stay was (12.25 ± 1.77) d (8-16 d). After treatment, 22 cases were evaluated as markedly effective, 14 cases as effective, and 2 cases as ineffective. The total effective rate was 94.7%. There were 1 case of spinal nerve injury and 1 case of bone cement leakage. The incidence of complications was 5.3%.

3.2 Compare the clinical indexes before and after treatment

The height of midline, anterior and posterior vertebral body, Cobb angle, VAS score, ODI score and ADL score of 38 patients before and after treatment were compared, which were significantly better than those before treatment (P<0.05).

Table 1. Comparison of clinical indexes before and after treatment ($\bar{x} \pm s$)

Group	Center line height (%)	Leading edge height (%)	Trailing edge height (%)	Cobb angle (°)	VAS score	ODI score	Activities of daily living score
Study group (n = 38)	73.28±9.63	62.03±8.94	68.22±12.77	17.85±3.24	6.02±1.28	48.77±1.42	40.59±3.62
Control group (n = 38)	87.75±12.96	85.76±12.15	86.94±13.01	2.71±1.05	1.85±0.49	30.22±1.28	75.98±8.25
T value	5.524	9.697	6.330	27.402	18.755	59.814	24.214
P value	0.000	0.000	0.000	0.000	0.000	0.000	0.000

4 Discussion

The elderly group is affected by age and other factors, such as the destruction of the internal micro structure of the bone, bone loss is more serious, combined with the influence of gravity and other factors, resulting in lateral position of the spine, scoliosis and vertebral compression and deformation fractures under the action of external force[4]. Clinical treatment of multiple senile osteoporotic spine fractures mostly adopts manipulative reduction and other treatment schemes. Such treatment schemes have single operation force line and long postoperative bed rest time, which can easily induce various complications. Therefore, it is necessary to adjust the treatment scheme according to the patient's condition[5].

Limb kyphoplasty is a new scheme for the clinical treatment of multiple osteoporotic spine fractures in the elderly. The bilateral approach and double balloon dilatation treatment mode are used in the operation, which can ensure that the collapsed endplate returns to the normal position, achieve good effect of integral reduction, and ensure the symmetry of bilateral bone fracture, so as to effectively correct the Cobb angle and restore the original height of the vertebral body[6]. In the treatment of different stages of osteoporotic spinal fracture, kyphoplasty can determine the targeted intervention measures according to the patient's fracture situation, which has no serious adverse effect on the surrounding normal vertebral body, has high operation safety, and can maximize the retention of vertebral mobility, so as to shorten the overall operation time, reduce the damage of intraoperative operation to the body, and shorten the postoperative period The overall recovery time, improve the treatment and prognosis effect[7-8].

Kyphoplasty can be used in the treatment of single or multiple vertebral bodies, and the injection of bone cement into the injured vertebral body is the key link of this operation. In this study, polymethylmethacrylate bone cement was used, and the injection operation should ensure that the injection pressure of bone cement is appropriate and the fluidity is good. During the operation, the state of bone cement injection should be closely monitored. If the position of bone cement is close to the posterior wall of vertebral body, the injection should be stopped. In addition, doctors need to accurately grasp the timing of bone cement injection, and it is suggested to choose early agglomerate phase or late wire drawing phase to inject bone cement, so as to improve the controllability of injection operation.

The total effective rate of 8 patients was 94.7%, and the complication rate was 5.3%. After treatment, the height of vertebral midline, anterior edge, posterior edge, Cobb angle, VAS score, ODI score, activity of daily living score were better than those before treatment. It can be considered that kyphoplasty is safe and effective in the treatment of multiple senile osteoporotic spinal fractures, and can be used as an effective treatment Restore the height of vertebral body, improve the activity ability and relieve pain.

In conclusion, the clinical effect of kyphoplasty in the treatment of elderly patients with multiple osteoporosis is significant, which can be promoted in all levels of medical institutions. At the same time, the total number of patients in this study is small, and the duration is short. The application effect of kyphoplasty still needs to be continuously analyzed.

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Journal of Clinical and Nursing Research

Research Article

Study on the Effect of Pain Nursing Intervention in ENT Wards

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Abstract: To explore the effectiveness of pain nursing interventions for patients in ENT. Methods: The 200 ENT patients admitted from March 2018 to March 2020 were divided into observation group (*n*=100) and control group (*n*=100). The control group was used conventional clinical nursing methods, and the observation group received pain nursing intervention as a comparison with the control group. Results: The observation group had 83 cases, 14 cases and 3 cases of mild, moderate and severe pain, respectively, while the control group are of 43 cases, 43cases and 14 cases. Nursing intervention can significantly reduce the pain of patients after otolaryngology surgery, improve the quality of life of patients, and has high clinical value for application.

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

Pain is a complex physical and psychological activity that is caused by existing or potential tissue damage. Studies have shown that a positive and optimistic mental state has a certain effect on reducing and inhibiting the pain caused by tissue damage. Otherwise, the intensity of pain will increase. For example, patients undergoing nasal cavity surgery may need gauze to fill the nasal cavity after surgery, which may cause headaches and dizziness. This symptom will be more noticeable for patients after undergoing throat surgery, thereby radially expanding the pain range. Meanwhile, if the patient suffers from long-term pain, the condition can easily affect the patient's mood during the treatment process, and may also extend the hospital stay [1]. Therefore, this study provides postoperative pain nursing intervention for patients with postoperative pain in otolaryngology. Compared with conventional nursing patients, the patient's pain has been greatly relieved with satisfactory results.

2 Data and methods

2.1 Data

From March 2018 to March 2020, 200 patients undergoing otolaryngology surgery were selected as the research objects. The patients are or over 18 years old and have a complete medical history. According to the random grouping by computer, the selected cases were divided into experimental group and control group, with 100 cases in each group. There were 57 males and 43 females in the experimental group, with an average age of 44.26 years (18-70 years). There were 56 males and 44 females in the control group, with an average age of 44.54 years (19-70 years).

2.2 Methods

The control group was given an appropriate dose of analgesics, and the nursing staff introduced the causes of postoperative pain to the patients and paid attention to the changes in the postoperative state of the patients. The experimental group carried out scientific nursing intervention based on conventional drugs to relieve pain. First, you need to create a good hospital environment for patients. Patients who have

undergone ENT surgery are usually susceptible to light and noise stimulation. Moreover, the noisy environment can easily affect the mood after the operation, so the nursing staff should pay attention to keeping the ward quiet, strictly control the room temperature and minimize the indoor illumination. That way, the patient can feel comfortable in the ward. Secondly, if the painful symptoms emerge, the patient will easily become irritable, so nursing staff can take appropriate steps to distract the patients, such as playing light music, and other active entertainment activities for the patients[2]. Third, psychotherapy must be given to patients after surgery. Patients who have undergone ENT surgery are often unsure of the effectiveness of the surgery themselves, hence they usually have a certain degree of fear. If pain occurs after surgery, they will under higher pressure. At that time, nursing staff should conduct effective psychotherapy for patients with poor mental status, communicate more with patients, understand the patients' internal worries, reduce the patients' psychological pressure, and establish cooperation in treatment. Fourth, if the patient's pain is obvious, a cold towel can be wiped on the forehead or neck early after the operation to promote vasoconstriction, eliminate local edema symptoms and reduce the patient's pain. Fifth, scientific health education can improve the treatment process of patients. Therefore, nursing staff should analyze the specific causes of postoperative pain, introduce relevant disease knowledge, and introduce relevant preventive measures to patients. That is how patients can fully understand and prevent the occurrence of various pain [3]. At the same time, patients should be instructed to insist to a healthy diet, eat more light and easy-to-digest nutritious foods, develop a good lifestyle, and take painkillers in accordance with the doctor's instructions.

2.3 Observation indicators

The pain status, mental state and patient satisfaction of the two groups were observed and compared. The visual analog scale was used to evaluate the patient's pain degree. Among them, 1 to 3 cases of mild pain, 4 to 6 cases of moderate pain, and ≥7 cases of severe pain. SAS and SDS were used to assess the mental state of patients.

2.4 Statistical methods

The data of the two groups of patients were calculated by using SPSS20.0 statistical software, and nursing satisfaction rate and other the count data were tested by X2, expressed as a percentage (%). If $P<0.05$, it indicates that the difference is statistically significant.

3 Results

The number of patients with mild, moderate, and severe pain in the observation group were 83, 14 and 3, respectively, while the control group was 43, 43, and 14 respectively.

Table 1. The comparison of pain degree of VAS between two groups

Group	Mild pain	Moderate pain	Severe pain
Observation group (*n*=100)	83	14	3
Control group (*n*=100)	43	43	14
P	0.00	0.00	0.02

Table 2. The comparison of Scores of SAS and SDS between two groups

Group	Cases	SAS		SDS	
		Before Intervention	After intervention	Before intervention	After intervention
Observation group	100	45.63±3.13	36.24±4.12	48.41±7.35	38.63±5.32
Control group	100	45.17±3.01	43.51±3.52	48.58±6.83	46.31±6.01

After pain nursing intervention, the reduction and improvement of SAS and SDS scores of the study group were greater than those of the control group, and the difference between the groups was statistically significant.

4 Discussion

Pain is the fifth vital sign which is an unpleasant and emotional sensation, accompanied by existing or potential tissue damage. Severe pain can cause shock (neuropathic shock) and a series of changes in body functions. Medication is the most basic and most commonly used method of pain treatment and the premium choice for pain control. The pain management model is to set the patient's treatment goals, applying comprehensive pain management

interventions to relieve anxiety, relieve pain and improve the patient's quality of life. Pain nursing intervention can reduce the pain symptoms of patients. That way, it will make patients full of confidence in life, ensure the effectiveness of pain treatment, and may be more conducive to disease recovery [4].

The degree and location of surgery are closely related to postoperative pain. The scope of ENT surgery is very small, but the surgical structure is very special. In addition, under the influence of physiological activities such as breathing and eating, the degree of pain may increase to some extent. Patients after ear surgery are prone to side effects such as dizziness and nausea. Throat surgery will aggravate the pain through swallowing, and the pain will affect the patient's mental activities to some extent, thereby increasing the possibility of negative emotions (such as depression, irritability, and anxiety). Meanwhile, increased pain will also affect the recovery of the disease. Therefore, in ENT surgery, not only doctors are required to have rich clinical experience, but the requirements for nursing are also high.

Some studies have shown that scientific pain treatment and active nursing measures are very important for reducing the pain of patients undergoing ENT surgery. There is a strong connotation, including holistic care and humanized care, which allows patients to receive treatment with a comfortable attitude and lays a good foundation for postoperative recovery. The purpose of nursing intervention is to reduce the clinical symptoms of pain in patients after otolaryngology surgery, promote health education, and improve patients' perception of pain. We should help patients cultivate a good mental state, and cooperate with the postoperative treatment process with a positive attitude to speed up the recovery [5]. Relevant studies have shown that targeted nursing intervention reflects that it is very patient-friendly for patients with pain after ENT surgery. After scientific nursing intervention, targeted nursing measures are taken for postoperative pain, to create a quiet atmosphere for patients, to explain disease-related knowledge to patients and their families, to provide patients with psychological counseling. We should concern about the emotion and distraction of the patients so as to minimize the pain and anxiety. It can help patients have confidence to tackle the problem of pain and actively and happily cooperate in treatment, and allow them to spend their postoperative recovery safely and peacefully. That is how the patient will be able to maintain a relatively good physical and mental state, and the subsequent physical recovery will be sooner.

Therefore, nurses should take patience and responsibility as the standard of clinical care, establish a harmonious relationship with patients, make patients feel stable and trusted, and lay a good foundation for smooth nursing work. Nursing staff should provide patients with pain-related psychological treatment before surgery to improve their pain perception and reduce psychological fear of pain. In addition, in order to reduce the burden of patients and surgical fears, nursing staff will conduct psychological assessments according to the specific conditions of patients, provide timely and positive comfort for patients' anxiety and fear, and take corresponding nursing measures [6]. The second is to inform patients' family members of relevant health knowledge, such as introducing diseases and related knowledge in relatively easy-to-understand language, and informing patients of prevention and cooperation in detail. By disseminating systematic health knowledge, we provide patients and their families with corresponding disease and nursing knowledge, which can improve the level of patients and care, and consolidate a harmonious relationship between care and patients. At the same time, the data results also show that the observation group had less pain than the control group. After the intervention, the SAS and SDS scores of the observation group were lower than those of the control group, and the overall satisfaction was higher than that of the control group. In other words, targeted nursing intervention can significantly reduce the suffering of patients, promote the physical and mental recovery of patients, and improve the quality of life.

All in all, targeted nursing treatment is implemented in the entire nursing work of patients with postoperative pain in the Department of Otolaryngology. By encouraging and comforting the patients, they relieve the pressure of the patients after the operation and provide pain relief treatment. It can minimize the patient's pain and make their body and mind healthier, and it is worthy of promotion and application in nursing work.

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Journal of Clinical and Nursing Research

Research Article

Analysis of the Effect of Infection Control in Hospital Operation Room

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Abstract: ***Objective:*** To explore the implementation effect of nursing management in operating room for hospital infection control. ***Methods:*** 100 cases of patients who received surgical treatment in our hospital from 2019 to 2020 were selected and divided into observation group and control group according to different nursing management methods in operating room. Patients in the control group received routine nursing management services, while patients in the observation group received systematic and high-quality comprehensive management services based on routine nursing management services. ***Results:*** The air colony count and hand colony count of the observation group were significantly better than those of the control group. At the same time, the incidence probability of infection in the observation group was also significantly lower than that of the control group, with significant difference between the groups, with statistical value ($P < 0.05$). ***Conclusions:*** In view of the occurrence of nosocomial infection, the implementation of high-quality operating room nursing service can effectively control it, reduce the probability of occurrence, and ensure the safety of patient treatment, which is worthy of clinical application.

Keywords: Operating room; Nursing management; Nosocomial infection

Publication date: January, 2021

Publication online: 31 January, 2021

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1 Introduction

Hospital infection literally means the infection during hospital treatment and the infection after discharge. This will be very serious harm to the patient's body and psychology, and then lead to the aggravation of the patient's condition, and even lead to medical disputes. Operating room is a high risk department for patients suffering from infection. Therefore, strict management system must be established to ensure aseptic operation.Conventional nursing management methods, the overall nursing model is not systematic, comprehensive and institutionalized, which leads to unclear nursing objectives, nursing staff's awareness of high quality nursing is not perfect, there are problems such as insensitive work response and low work efficiency.Therefore, the article selected 100 patients as the research object, put forward more high-quality and comprehensive operating room nursing management, applied it to the control of hospital infection, and studied its specific application effect, which is reported as follows.

2 Material and methods

2.1 General information

100 cases of patients who received surgical treatment in our hospital from 2019 to 2020 were selected and divided into observation group and control group according to different nursing management methods in operating room.Patients in the control group received routine nursing management services, while patients in the observation group received systematic and high-quality comprehensive management services based on routine nursing management services.There were 50 patients in the control group, including 30 males and 20 females, aged from 30 to 70 years old, with an average age of (50.12 ± 1.13) years;There

were 50 patients in the observation group, including 32 males and 18 females, aged from 32 to 70 years, with an average age of (51.14 ± 1.21) years.There is no difference in the basic clinical treatment between the two groups, which can be used for comparative study.

2.2 Methods

The control group received routine nursing management services, and the specific measures included:

(1) Create a quiet, comfortable and clean operating room environment, and regularly clean, ventilate and disinfect the operating room.

(2) The humidity and temperature in the operating room should be kept in a reasonable range to improve the adaptability of the intensifier.

(3) Regularly check, maintain and replace the equipment in the operating room.

The observation group was based on routine nursing management services, combined with systematic and comprehensive high-quality management services. Strengthen the relevant measures of infection monitoring and management. The operating room is strictly divided into restricted area and non restricted area, so as to avoid the infection caused by personnel flow. For different departments, create different operating rooms. The medical instruments, medical equipment and surgical articles in the operating room shall be placed in the specified position. Strengthen the standardization of aseptic operation.In view of the relevant personnel to carry out aseptic operation training regularly, strengthen the scientific and comprehensive grasp of aseptic operation technology, including hand cleaning and disinfection, surgical instrument disinfection and scientific and rational use of drugs and so on.

Strengthen the management of ward. The operating room was strictly divided into bacterial area and sterile area. For example:The patients with infection and specific infection were treated in the operating room.In addition, ensure that the dressings and instruments used in the operation process are strictly disinfected and marked to avoid mixing with other excipients. The operation process should be strictly in accordance with aseptic operation, including hand washing, dressing of isolation clothing, nurse Putai, and aseptic drug handling and injection treatment, etc.After the operation, the air on the ground of the operating room should be strictly disinfected.

Strengthen the management of disposable medical facilities. Disposable medical supplies are widely used in operation. Therefore, the key to effectively control nosocomial infection is the application and management of disposable medical supplies. Before the use of medical supplies, the trademark, manufacturer, sterile period of validity and production batch number of the goods should be strictly and carefully checked. Once the unqualified, uncoordinated, contaminated and expired products are found, the use of them should be strictly prohibited. Disposable medical supplies should be stored in a special cabinet, and the cabinet should be clean and dry, and the bacteria content should be strictly controlled.The disposable medical supplies should be incinerated.

Strengthen the nursing service for patients with surgery.In strict accordance with the relevant requirements of the procedure, the high-quality nursing work will be implemented in the operation of patients with skin preparation and surgical incision infection prevention. At the same time, we need to pay close attention to the changes of patients' vital signs after the operation. If there is any abnormality, we should report it to the attending doctor as soon as possible. In addition, patient medication guidance to patients, regular turnover and skin care for patients and other related nursing measures.

2.3 Evaluation criteria

The air colony count and hand colony count of the two groups were compared;The probability of infection was compared between the two groups.

2.4 Statistical analysis

SPSS 24.0 statistical software was used to process the data. The count data was expressed by (n /%), χ^2 test, and the measurement data was expressed by (x± s), t test. $P < 0.05$ was considered to be statistically significant.

3 Results

3.1 Comparison of air colony count and hand colony count between the two groups

The air colony number and hand colony number of the observation group were significantly less than those of the control group, and the difference between the two groups was significant ($P < 0.05$).

Table 1. Comparison of air colony count and hand colony count between the two groups [$\bar{x} \pm s$/ min]

Group	Air bacterial count before operation	Air bacterial count after operation	Hand colony count
Observation group (n = 50)	882.31±113.62	91.64±1.28	2.02±2.04
Control group (n = 50)	890.62±118.34	323.14±62.27	8.17±2.14
T value	4.113	4.212	4.312
P value	0.023	0.013	0.024

3.2 Comparison of infection incidence between the two groups

In the observation group, there was 1 case of upper respiratory tract infection, 1 case of urinary tract infection, and the infection rate was 4.0%; In the control group, there were 2 patients with upper respiratory tract infection, 2 patients with lower respiratory tract infection, 3 patients with incision infection, 1 patient with urinary tract infection, and the infection rate was 16.0%.

4 Discussion

Operating room is the key department of hospital infection prevention. The infection probability of operating room is very high, accounting for the vast majority of the overall infection probability of the hospital. And nursing staff will be involved in each process of operating room operation[1]. Therefore, nurses need to strictly follow the rules and regulations to carry out nursing operation, which is the direct way to effectively control the occurrence of nosocomial infection[2]. In order to achieve more effective hospital infection control, comprehensively ensure the improvement of the diagnosis and treatment effect of patients, and improve the prognosis of patients, the first task is to strengthen the anti infection awareness of operating room nursing staff, strictly require the implementation of various rules and procedures in operating room nursing operation, start from the details, strictly require themselves, and establish the idea that hospital infection control should start from prevention Positive awareness, to ensure the overall improvement of the quality of nursing management, in order to ensure the monopoly of infection, reduce the efficiency of infection, ensure the effect of surgical treatment, and ensure the life safety of every patient[3].

Operating room nursing management involves every patient, which is closely related to the life and health of patients and the effect of surgical treatment[4]. Medical staff should adhere to all from the perspective of the interests of patients, strengthen the nursing management of the operating room, strictly implement the hygiene and cleaning of the operating room, pay attention to the improvement of their professional quality, and actively improve the medical environment of the operating room. The main factors of infection during operation were as follows

Medical equipment factors. With the development of social economy and the improvement of medical technology, disposable medical equipment is usually used in the operating room at this stage, which is very convenient and simple. However, these disposable medical equipment need strict and effective management, otherwise it will become a major factor leading to hospital infection.

Environmental factors. Operating room is the main position of nosocomial infection.Because the operating room has to accept several patients every day, the operating table is used frequently, and the flow of patients in the operating room is large, which leads to the increase of particles in the air of the operating room, thus greatly improving the probability of hospital infection[5].

Patient factors. Scientific, reasonable and systematic nursing intervention is needed for patients who have received surgical treatmentSkin preparation and incision protection.Not strict nursing operation may lead to the invasion of bacteria, causing very serious pollution after a large number of reproduction[6].

The conventional nursing management methods and the overall nursing mode are lack of enough systematization, comprehensiveness and institutionalization, which leads to unclear nursing objectives, unsound nursing awareness of nursing staff, insensitivity to work response and low work efficiency[7]. The high-quality nursing service proposed in this article takes patients as the core, combines with the actual situation and specific needs of patients, and develops scientific and reasonable surgical nursing management rules and regulations on this basis, and specifies the nursing operation process in the operating room as strict

regulations to implement, so as to achieve effective nursing management in the operating room[8]. The results showed that the number of air colonies and hand colonies in the observation group was significantly less than that in the control group, and in the observation group, there was 1 case of upper respiratory tract infection, 1 case of urinary tract infection, and the incidence of infection was 4.0%;In the control group, there were 2 patients with upper respiratory tract infection, 2 patients with lower respiratory tract infection, 3 patients with incision infection, 1 patient with urinary tract infection, and the infection rate was 16.0%.There was significant difference between the two groups ($P < 0.05$).

Summarize the full text, the operating room nursing management requirements to patients as the core, from the nursing staff's professional care, medical supplies care and sanitation and other aspects of effective nursing management.In view of the occurrence of nosocomial infection, the implementation of high-quality operating room nursing service can effectively control it and reduce the probability of occurrence, which is worthy of clinical application.

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Journal of Clinical and Nursing Research

Research Article

Acute Guillain Barre Syndrome in Hemodialysis Patients with Diabetic Nephropathy: A Case Report

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Abstract: Acute Guillain Barre syndrome is a common type of autoimmune mediated acute peripheral neuropathy. Its initial symptoms are symmetrical limb weakness, sensory disturbance, pain or other symptoms. This paper reports a case of acute Guillain Barre syndrome in a uremic patient with diabetic nephropathy and long-term regular hemodialysis, in order to further explore the clinical manifestations and differential characteristics of uremic patients with acute Guillain Barre syndrome, improve the early diagnosis rate of uremic patients with acute Guillain Barre syndrome, make the patients get timely treatment, so as to reduce the disability of such patients To improve the prognosis of the disease.

Key words: Acute Guillain-Barre syndrome; Uremia; Diabetic peripheral neuropathy

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Case data

A 51 years old male patient with a history of type 2 diabetes mellitus for 9 years and hypertension for 1 year had poor control of blood glucose and blood pressure. The varicose veins of the right lower extremity were operated on 3 years ago. Five years ago, the patient's physical examination found that the urine test was abnormal, and the urine routine examination was positive for urine protein. He was diagnosed as diabetic nephropathy, and was treated regularly, but not regularly reviewed. More than one year ago, his renal function test showed that creatinine was about 150 umol/L, and he took Chinese medicine treatment. 11 months ago, his renal function test showed that creatinine increased significantly, rising to about 500 umol/L, so he took internal venous fistula plasty, and suggested hemodialysis vascular access. After the internal fistula was completed, his renal function test showed that creatinine increased to about 900umol / L again, so he started hemodialysis treatment, in the local hospital three times a week, the condition is still stable, but no hemoperfusion or hemodiafiltration treatment. More than 20 days before admission, the patient had no obvious cause of lower limb pain, followed by numbness of both feet and toes, resulting in weakness of both lower limbs and difficulty in walking and standing. In the local hospital, the brain MRI showed multiple lacunar cerebral infarction, and nutritional nerve therapy was given. The patient's condition continued to worsen and developed to numbness and weakness of limbs. He came to our hospital for further diagnosis and treatment. Physical examination on admission: T 36.6 ℃ , P 76 times / min, R 20 times / min, BP 162/106 mmHg. There was no edema in both eyelids, no pallor in eyelid conjunctiva, equal size and equal circle in both pupils, about 3mm in diameter, thick respiratory sounds in both lungs, no dry or wet rales, heart rate of 76 beats / min, arrhythmia, no pathological murmur in auscultation area of heart valves. The abdomen was flat and soft without tenderness, rebound pain and muscle tension. The liver and spleen were not touched under the ribs. The bowel sounds were normal. The scar of arteriovenous fistula operation could be seen in the left forearm. The vascular

tremor could be touched above the scar. The vascular murmur could be heard by auscultation. There was no edema in both lower limbs. The cranial nerves were normal, the muscle strength of both upper limbs was grade 4, the muscle strength of both lower limbs was grade 3, the muscle tension of the limbs was normal, the tendon reflex of the limbs was not elicited, the pain of the distal segment, sole and toe of both upper limbs was decreased, the Chaddock sign was negative on both sides, the Kernig sign was negative, and the Babinski sign was negative on both sides. Auxiliary examination after admission: Routine blood test:The red blood cell count was 4.08 * 10^{12}/L, hemoglobin was 125g /L, ESR was 17mm /h. Biochemical routine test: Urea 28.56mmol/l, creatinine 1004umol/ L, Cystatin C 7.96mg/l, blood glucose 6.12mmol/l. Immunization: SSA antibody (±), antinuclear antibody 1:100 positive, karyotype (nuclear granular type, cytoplasmic granular type).Serological examination: Vitamin B12 > 2000.0 pg /ml, troponin 60.140 ng/ L, myoglobin 470.400 ng / ml, parathyroid hormone 228.80 pg/ml, N-terminal pro-B-type natriuretic peptide 1626 pg/ml, procalcitonin 1.010 ng / ml, 25 hydroxyvitamin D 28.45 ng / ml. ECG: Sinus rhythm, abnormal T wave. Electromyography: multiple severe peripheral nerve injuries. The results of autoimmune peripheral neuropathy series antibody test showed that anti-GD1a antibody IgM (+), anti-GD1b antibody IgM (++), anti-GD2 antibody IgM (+), anti-Sulfatide antibody IgG (+), IgM (+). Six serum test results of autoimmune encephalitis-related antibodies were not abnormal. The cerebrospinal fluid examination was not completed because the patient and his family refused to perform a lumbar puncture biopsy. After consultation in the Department of Neurology, the patient was considered as acute Guillain Barre syndrome, and was given neuronutrition, hemodialysis, hemoperfusion, and hemodiafiltration treatment. He was transferred to the Department of neurology to receive glucocorticoid pulse therapy and intravenous injection of human immunoglobulin. At the same time, he was given physical therapy such as Electroacupuncture stimulation and physical factors. After treatment, the condition did not worsen significantly, and the condition stabilized and the patient left hospital.

2 Discussion

Guillain Barre syndrome, also known as inflammatory demyelinating polyneuropathy, was first discovered by two biologists guillan and Barre in 1916. It is characterized by acute onset, disappearance of tendon reflex, quadriplegia and cerebrospinal fluid protein cell separation. It can also involve cranial nerve and autonomic nerve. In severe cases, respiratory muscle paralysis may occur and cause death. The pathological features were infiltration and destruction of inflammatory cells in nerve roots and peripheral nerves. According to the location and form of nerve root injury, acute Guillain Barre syndrome is divided into three subtypes, namely acute inflammatory demyelinating polyneuropathy, acute motor axonal neuritis and Miller Fisher syndrome[2]. The typical clinical manifestation of acute Guillain Barre syndrome is progressive bilateral or relatively symmetrical limb weakness, mostly from the distal end, gradually involving the proximal end. Some patients have cranial nerve involvement, and can also have symptoms or signs of sensory ataxia and autonomic nerve involvement.

For the immunotherapy of acute Guillain Barre syndrome, plasma exchange, glucocorticoid and immunoglobulin are generally considered to be effective. In principle, the earlier the immunotherapy, the better. Plasma exchange can clear nonspecific antibodies, complement and inflammatory factors in patients. Immunoglobulin can neutralize antibodies and inhibit antibody and complement activation. In addition, early rehabilitation treatment can restore motor and sensory function to a certain extent, which has a positive effect on reducing the disability rate of patients with acute Guillain Barre syndrome.

The exact pathogenesis of Guillain Barre syndrome is still unclear, but most studies believe that its pathogenesis is related to autoimmune factors, and is mostly secondary to some precursor diseases[2]. It is generally believed that patients have a history of nonspecific infection before the onset of the disease, in which bacterial and viral infections are more common. Studies have found that Campylobacter jejuni infection is an important factor in inducing Chinese Guillain Barre syndrome[3]. In addition, cytomegalovirus, Epstein Barr virus, hepatitis B virus, HIV and Mycoplasma pneumoniae infection can be involved in inducing acute Guillain Barre syndrome[4]. Patients usually get sick after 1-2 weeks of infection, progress rapidly within 12 hours, and reach the peak within 2-4 weeks. For Guillain Barre syndrome, the

diagnostic examination is cerebrospinal fluid protein cell separation phenomenon[5]. In this case, it is a pity that the cerebrospinal fluid examination can not be improved due to the refusal of the patient and his family members to carry out lumbar puncture biopsy. However, the serum ganglioside antibody found in the patient has a key role in the diagnosis of Guillain Barre syndrome, and it suggests that it may be acute Motor axonal neuropathy. For this patient, the basic diseases were type 2 diabetes mellitus and diabetic nephropathy, and regular hemodialysis treatment had been performed. In the diagnosis and treatment of uremia, peripheral neuropathy was easily misdiagnosed as peripheral neuropathy.

Diabetes is often complicated with a variety of chronic complications, diabetic nephropathy, diabetic peripheral neuropathy and diabetic retinopathy are known as "diabetic triad"[6]. The most common type of diabetic peripheral neuropathy is distal symmetric polyneuropathy, with the involvement of sensory and motor nerves in the distal part of hands and feet. The other common type is focal mononeuropathy, which can involve the brain nerve or spinal nerve, but the oculomotor nerve, median nerve and popliteal nerve are the most common. In addition, there are asymmetric multiple focal neuropathy and multiple radiculopathy. In this case, the clinical manifestation of the patient is similar to that of diabetic peripheral neuropathy, and the history of diabetes is long, which is easy to cover up the condition of Guillain Barre syndrome and cause misdiagnosis.

The symptoms of uremia are various, and complications of multiple organs and systems can occur. Long term hemodialysis patients, combined with nervous system damage is also more common. Uremic nervous system damage can involve the central nervous system, peripheral nervous system and autonomic nervous system, with a variety of clinical manifestations, and it is also difficult to distinguish from primary nervous system diseases. More than 80% of patients with long-term hemodialysis have neuropathy, and the degree of neuropathy has nothing to do with dialysis age and gender[7]. It is generally believed that uremic neuropathy is associated with excessive accumulation of neurotoxins, especially with middle molecular toxins with relative molecular weight of 500-5000 daltons[8]. The most common clinical manifestation of paresthesia is hypoesthesia or hypoesthesia. With the development of the disease, autonomic nerve damage often occurs. However, the general hemodialysis treatment has no obvious improvement on uremic nerve damage[9]. Compared with the general hemodialysis, the blood purification method with better clearance effect on large and medium molecular toxins can significantly improve uremic nerve damage.

The early clinical manifestations of acute Guillain Barre syndrome are various. With the increase of basic diseases, the misdiagnosis of Guillain Barre syndrome is caused. Improving the clinical experience of clinicians is helpful to reduce the misdiagnosis rate of the disease. At present, the diagnosis and treatment of Guillain Barre syndrome is still a relatively difficult challenge for doctors and patients. Early diagnosis and timely treatment have a positive impact on the prognosis of Guillain Barre syndrome. In the process of clinical diagnosis and treatment, for patients with a variety of basic diseases that can cause peripheral nerve damage at the same time, when limb weakness, sensory disorders and other symptoms suddenly occur, we need to be alert whether there is Guillain Barre syndrome, so as not to delay the treatment and affect the prognosis.

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Journal of Clinical and Nursing Research

Research Article

Effect of Continuous Nursing on Quality of Life of Patients with Diabetes Mellitus

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Abstract: ***Objective:*** To analyze the effect of continuous nursing on the quality of life of patients with diabetes. ***Methods:*** From August 2019 to August 2020, 76 patients with diabetes were selected and randomly divided into group A and group B. group a received continuous nursing and group B received routine nursing. ***Results:*** The compliance of health education in group A was better than that in group B ($P < 0.05$);The score of quality of life in group A was better than that in group B ($P < 0.05$);The scores of anxiety and depression in group A were better than those in group B ($P < 0.05$);The nursing satisfaction of group A was 97.37%, which was better than that of group B 76.32%, $P < 0.05$. ***Conclusions:*** Continuous nursing for patients with diabetes can improve the quality of life, relieve anxiety, depression and other negative emotions, and improve nursing satisfaction.

Keywords: Diabetic patients; Continuing care; Quality of life; Influence

Publication date: January, 2021
Publication online: 31 January, 2021
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Diabetes mellitus is a common metabolic disease in clinic. Its typical feature is hyperglycemia, which is mainly related to insulin secretion disorders or defects. The human body is in a state of hyperglycemia for a long time, which can damage various tissues and organs, and then cause dysfunction. So far, the etiology of diabetes and effective treatment drugs have not been identified in clinic, so long-term drug intervention is needed after the onset of diabetes, but some patients have limited cognition of diabetes, which leads to poor blood glucose control after discharge and affects the prognosis. Therefore, it is extremely important to implement efficient out of hospital nursing intervention[1]. In this paper, 76 cases of diabetic patients were selected as samples to explore the application value of continuous nursing. The report is as follows.

1 Material and methods

1.1 Information

From August 2019 to August 2020, 76 cases were randomly divided into two groups. In group A, there were 21 males and 17 females, aged from 41 to 70 years, with an average of (57.89 ± 0.63) years;Group B received routine nursing, including 20 males and 18 females, aged 40-69 years old, with an average of (58.14 ± 0.64) years old.The patients with heart and liver diseases and cognitive impairment were excluded.The ethics committee approved the study. Compared with 76 patients, $P > 0.05$.

1.2 Methods

Group a received continuous nursing. (1) A continuous nursing group was established, including head nurses and primary nursing staff, and a targeted guidance manual was developed based on the actual situation of patients[2]. (2) Regular telephone follow-up was carried out to master the diet, exercise and knowledge of patients after discharge, urge patients to control blood sugar, improve their nursing compliance, enhance their health knowledge cognition, and inform them of the return visit time. At the same time, telephone was reserved to adjust the follow-up frequency in combination with the blood sugar fluctuation of patients[3]. (3) The health education manual should be created for diabetic

patients after admission, including department introduction, doctor introduction, responsible nurse introduction, and contact information of relevant personnel. At the same time, the targeted life guidance should be given according to the patient's own condition, which can improve the trust between nurses and patients. (4) Regular exchange meetings will be held for patients with diabetes. Patients with good blood glucose control will talk about their cognition of diabetes, including daily blood glucose control methods, how to maintain a happy mood, diabetes treatment plan, etc. [4]. (5) Create wechat group, carry out diabetes health explanation regularly, and professional medical staff can answer patients' doubts, popularize relevant knowledge, improve patients' cognition of diabetes, encourage patients to communicate and exchange daily protection experience with each other. Patients with doubts can be consulted directly through wechat group, and medical staff can master patients' daily care through wechat group situation.(6) Regular door-to-door follow-up, the responsible nurse should regularly follow-up the nursing staff, guide the patients to correctly use the blood glucose meter, at the same time, inform the daily precautions, strengthen the health education, give targeted psychological intervention and medication intervention, so as to improve the patients' self-protection awareness and ensure stable blood glucose [5].

Patients in group B received routine nursing, heart rate, blood glucose, body weight, respiration and ECG were examined to provide routine clinical nursing.

1.3 Statistical study

SPSS 33.0 was used to calculate the data of patients with diabetes and depression, and%, $\bar{x} \pm s$ were used to record the count and measurement indexes of patients with diabetes during diagnosis and treatment. The data differences between groups were tested by χ^2 and t test. $P < 0.05$, the data can be compared.

2 Results

2.1 Comparison of health education compliance differences

The compliance of blood glucose monitoring (94.74%), reasonable diet (92.11%), moderate exercise (97.37%) and correct medication (89.74%) were significantly improved in group A after continuous nursing. Compared with the indexes of blood glucose monitoring (73.68%), reasonable diet (68.42%), moderate exercise (71.05%) and moderate exercise (62.79%) in group B, $P < 0.05$. See Table 1.

Table 1. Difference analysis of health education compliance among groups (*n*, %)

Group name	Blood glucose monitoring	Reasonable diet	Moderate exercise	Correct medication
Group A (*n* = 38)	36 (94.74)	35 (92.11)	37 (97.37)	34 (89.74)
Group B (*n* = 38)	28 (73.68)	26 (68.42)	27 (71.05)	25 (62.79)
χ^2	6.3333	6.7279	9.8958	6.1376
P	<0.05	<0.05	<0.05	<0.05

2.2 Comparison of quality of life scores between groups

After continuing nursing, the scores of quality of life in group A were significantly improved, compared with the data in group B, $P < 0.05$. As shown in Table 2.

Table 2. Quality of life score difference analysis table (score, $\bar{x} \pm s$)

Group name	Social quality	Mental health	Emotional function	Physiological function	Somatic function
Group A (*n* = 38)	84.51±2.47	85.46±2.51	87.69±2.84	88.25±2.97	86.79±2.84
Group B (*n* = 38)	71.46±2.16	70.94±2.32	72.47±2.17	73.41±2.74	74.62±2.42
t	24.5169	26.1873	26.2503	22.6388	20.1063
P	<0.05	<0.05	<0.05	<0.05	<0.05

2.3 The scores of anxiety and depression were compared between the two groups

The scores of anxiety (30.14 ± 1.85) and depression (31.75 ± 1.75) in group A were better than those in group B (40.19 ± 2.14) and (41.62 ± 2.13), $P < 0.05$; Before nursing intervention, the scores of anxiety and depression in group A and B were compared, $P > 0.05$. As shown in Table 3.

Table 3.

Group	Anxiety score (points)		Depression score (points)	
	Before nursing	After care	Before nursing	After care
Group A (n = 38)	52.68±2.47	30.14±1.85	50.49±2.58	31.75±1.75
Group B (n = 38)	52.78±2.51	40.19±2.14	50.51±2.61	41.62±2.13
t	0.1751	21.9006	0.0336	22.0709
P	>0.05	<0.05	>0.05	<0.05

2.4 Analysis table of nursing satisfaction between groups

Group a received continuous nursing intervention, nursing satisfaction was 97.37%, group B received routine nursing intervention, nursing satisfaction was 76.32%, $P < 0.05$. As shown in Table 4.

Table 4. Difference analysis of nursing satisfaction between groups (n,%)

Group name	Satisfied	Basically satisfied	Dissatisfied	Satisfaction
Group A (n = 38)	26 (68.42)	11 (28.95)	1 (2.63)	97.37
Group B (n = 38)	23 (60.53)	6 (15.79)	8 (21.05)	76.32
χ^2	-	-	-	6.1758
P	-	-	-	<0.05

3 Discussion

In recent years, people's living habits and eating habits have been changing. The incidence rate of diabetes has been increasing year by year, which seriously affects the quality of life of patients. So far, no specific therapeutic drugs have been developed in clinic. In addition to the characteristics of long course, many complications and complex condition of diabetes, long-term medication and pain affect the physical and mental health of patients. Therefore, improving the quality of life and treatment compliance of patients with diabetes is still a hot topic in clinical research[6]. In the conventional nursing mode, the nursing work is limited in the hospital, and the nursing is interrupted after the patient is discharged, which is not conducive to the long-term control of blood glucose.In recent years, with the deepening of clinical research on diabetes, continuous nursing has been gradually applied in clinic. The nursing scheme mainly aimed at patients after discharge can help patients correct bad living habits, improve patients' cognition of diabetes and their confidence in overcoming the disease, so as to improve the prognosis of patients.Under the continuous nursing mode, regular follow-up can help patients master their own disease changes and strengthen daily nursing knowledge[7]. During the actual implementation of extended nursing intervention, through the establishment of extended nursing group, combined with the patient's own condition to develop nursing guidance manual, it is conducive to provide targeted nursing;Through regular telephone follow-up, the patient's condition progress after discharge can be mastered, and the nursing compliance can be improved;Through regular follow-up, targeted medication intervention and psychological intervention were given to improve their self-protection awareness, relieve the negative emotions of patients, and improve their treatment and nursing compliance[8]. Combined with the analysis of this study, after the continuous nursing intervention, the nursing compliance of group A was significantly improved, the scores of various quality of life were significantly improved, the negative emotions of anxiety and depression were relieved, and the nursing satisfaction was as high as 97.37%, compared with the data of group B, $P < 0.05$.It is suggested that continuous nursing intervention for patients with coronary heart disease and depression can improve the self-care ability of patients, which has clinical promotion value.

In conclusion, continuous nursing for patients with diabetes can improve the quality of life of patients, enhance the compliance of treatment and nursing, and alleviate negative emotions, with significant effect. However, the sample data included in this study is less, and the observation time is short. Therefore, in order to explore the medium and long-term effect of continuous nursing for patients with diabetes and its impact on the quality of life and negative emotions of patients, it is necessary to increase the number of samples, extend the research time, and carry out further research.

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Journal of Clinical and Nursing Research

Research Article

Clinical Observation of Dexmedetomidine Combined with the Mixture of Propofol and Etomidate on Painless Gastroscopy in Children

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Abstract: ***Objective:*** To observe the anesthetic effect of dexmedetomidine combined with the mixture of propofol and etomidate on painless gastroscopy in children. ***Methods:*** A total of 80 pediatric patients who underwent painless gastroscopy in the Guangxi Minzu Hospital from January 2019 to September 2020 were randomly divided into two groups, A and B, with 40 patients in each group. Group A was given A mixture of etomidate 20 mg and propofol 0.2g, Dexmedetomidine was pumped into group B 10min before surgery, 0.4 g/kg. HR, SBP, DBP, SpO_2 and BIS were continuously monitored after entering the room. The doses of propofol and etomidate were recorded, as well as the time of waking and leaving the hospital. Adverse reactions such as hypotension, hypoxemia, nausea, vomiting and dizziness were recorded too. ***Results:*** Compared with group A, the dosage of propofol and etomidate in group B was significantly reduced ($P < 0.001$), the time of waking and out of the chamber were significantly shortened ($P < 0.001$), the body movement in the incidence of intraoperative was significantly reduced ($P < 0.001$), and the nausea, vomiting and dizziness in the incidence of postoperative were significantly reduced ($P < 0.05$). ***Conclusion:*** Dexmedetomidine combined with propofol and etomidate mixture can be safely used in painless gastroscopy in children, which can significantly reduce the dosage of propofol and etomidate, reduce the occurrence of adverse reactions, and shorten the time of resuscitation and discharge.

Key words: Painless gastroenteroscopy; Dexmedetomidine; Propofol; Etomidate; Children

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

The mixed solution of propofol and etomidate is one of the common combinations of anesthetic drugs used in clinical painless gastroenteroscopy in recent years[1]. Dexmedetomidine can induce sedation and hypnosis in patients, reduce stress response, stabilize hemodynamics, relieve pain, inhibit saliva secretion, and resist cold and war, and is not easy to produce respiratory depression[2]. Previous studies have found that dexmedetomidine combined with other sedatives and analgesics can significantly reduce the use of other sedatives and analgesics during painless gastroenteroscopy and shorten the time of patients' resuscitation[3]. There has been no study on the use of dexmedetomidine combined with the mixed solution of etomidate and propofol in children's painless gastroscopy. This study aims to observe the anesthetic effect of dexmedetomidine combined with the mixed solution of etomidate and propofol in children's painless gastroscopy and provide clinical evidence.

2 Materials and Methods

2.1 General Information

This study was approved by the Ethics Committee of Guangxi Minzu Hospital, and the patients' informed consent was obtained. A total of 80 pediatric patients who underwent painless gastroscopy in the Guangxi Minzu Hospital from January 2019 to September 2020 were selected. They were randomly divided into A and B groups with 40 patients in each group. Inclusion criteria :(1). Age ≥6 years and ≤14 years. (2). ASA Ⅰ ~ Ⅱ level. Exclusion criteria: (1). Upper respiratory tract infection. (2) Complicated with serious diseases of heart, liver, brain, lung, kidney and other organs. (3) No psychiatric disease, no history of long-term use of psychiatric drugs. (4) ECG showed no bradycardia or atrioventricular block. Experimental drug Dexmedetomidine Hydrochloride injection (Yangzijiang Pharmaceutical Group Co., LTD., approval Number: H20183219, specification: 0.2mg/2ml);Propofol emulsion injection (xi 'an libang pharmaceutical co., LTD., approval number: H20010368, specification: 0.1g/10ml);Etomidyl emulsion injection (Jiangsu Nhwa Pharmaceutical Co.,Ltd., approval no. : H20020511, specification: 20mg/10ml)

Table 1. Comparison of general conditions of patients in groups A and B

Group	Male/Female	Age(Year)	Weight (kg)	ASA Ⅰ / Ⅱ
A (*N*=40)	20/20	10.13±2.29	34.85±10.20	28/12
B (*N*=40)	23/17	10.28±2.32	36.03±11.41	32/8

2.2 Methods

All patients fasted for 8 h and drank for 4 h before surgery. Intravenous needle was inserted before anesthesia, and oxygen was given to the nasal catheter at a flow rate of 2L/min. Noninvasive arterial blood pressure, electrocardiogram, oxygen saturation, respiratory rate and bispectral index(BIS) were monitored. Patients in group A were given preoperative intravenous injection of propofol and etomidate mixture (the mixture consisted of 20mg etomidate mixed with 0.1g propofol into 0.5% propofol injection, A total of 20ml), and propofol injection measured at 1mg /kg was performed for 1min. Patients in group B were pre-operatively injected with dexmedetomidine hydrochloride by injection pump at a constant speed, with a pumping dose of 0.4 g/kg and a pumping time of 10 min. After the pumping, the same dose of etomidate mixture was used for injection. BIS was controlled intraoperatively between 40 and 60, and the time of gastroscopy was less than 5 min[4]. Propofol is injected at any time according to the situation, and 0.5 mg/kg of propofol is injected each time. If heart rate per minute during operation <50. Atropine was given 0.3mg intravenously. If the systolic blood pressure was lower than 25% of the basic value, ephedrine was given 2mg for each intravenous injection, and when SpO_2≤90%, the nasal catheter was increased to 5L/min.

2.3 Observe

The final intraoperative dose of propofol and etomidate, the resuscitation time (from the time when gastroscope left the mouth to the time when patients opened their eyes autonomously) and the time when patients left the hospital after anesthesia were recorded (the time when patients opened their eyes autonomously to the time when they met the standard of leaving the hospital after anesthesia ≥9 points, and the standard of leaving the hospital after anesthesia was PADSS score).The incidence of adverse reactions such as hypotension, hypoxemia, dizziness, nausea and vomiting was recorded.

2.4 Analysis

SPSS25.0 software was used for statistical analysis. The difference was statistically significant (P<0.05).

3 Results

The wake time and leave time of group B were significantly shorter than group A (P<0.001); The amount of propofol and etomidate was significantly lower than that of group A (P<0.001), as shown in Table 2. The incidence of movement, nausea, vomiting and dizziness in group B was less than that in group A (P<0.05);There was no significant difference in the incidence of hypotension and hypoxia between the two groups, as shown in Table 3.

Table 2. Comparison of patients' waking time, leave time, propofol dosage and etomidate dosage

Group	waking time (min)	leave time (min)	propofol (mg)	etomidate (mg)
A (n=40)	46.45±8.04	17.35±3.09	55.40±12.22	11.08±2.44
B (n=40)	34.68±7.83	8.20±2.56	39.83±12.48	7.97±2.50
t	6.635	14.404	5.640	5.640
P	<0.001	<0.001	<0.001	<0.001

Table 3. Comparison of intraoperative and postoperative adverse reactions

Group	movement	hypoxia	hypotension	Nausea and vomiting	dizziness
A (n=40)	29	7	18	7	13
B (n=40)	8	3	10	0	3
χ^2	22.175	1.829	3.516	7.671	7.813
P	<0.001	0.176	0.100	0.006	0.01

4 Discussion

In the diagnosis and treatment of gastroscopy, due to the rich distribution of laryngopharyngeal nerves, patients are often accompanied by throat discomfort, cough, nausea and vomiting, but not sensitive to pain. Therefore, sufficient sedation can meet the requirements of gastroscopy, but also avoid the drastic changes in hemodynamics of patients and improve the safety of painless gastroscopy. Dexmedetomidine is a highly selective 2 adrenergic receptor agonist that acts on the central and peripheral nervous systems, it acts on the α2 receptor in the locus coeruleus and stimulates endogenous sleep-promoting pathways, thereby inducing sedative and hypnotic effects in patients. At the same time, the drug can also reduce stress response, stabilize hemodynamics, analgesia, and inhibit saliva secretion. In a meta-analysis, dexmedetomidine also prevented perioperative nausea and vomiting [6]. Previous studies have also confirmed that the use of dexmedetomidine in painless endoscopy in children can reduce the probability of adverse events [7], In addition, dexmedetomidine has a good synergistic effect when used in combination with other sedatives and analgesics, and can significantly reduce the use of other sedatives and analgesics.

Propofol etomidate mixture injection is one of the common anesthesia methods used in the diagnosis and treatment of painless gastroscopy. The study of Yang Xiaochun [1] showed that propofol etomidate mixture could reduce the time for patients to wake up and leave the hospital, and reduce intraoperative and postoperative adverse reactions. In this study, propofol etomidate mixture was used for painless gastroscopy in children, and 0.4 g/kg dexmedetomidine was pumped 10min before surgery. The dosage of propofol and etomidate was significantly reduced ($P < 0.001$), the time of waking and leaving hospital was significantly shortened ($P < 0.001$), the incidence of intraoperative body movement was significantly reduced ($P < 0.001$), and the incidence of postoperative nausea, vomiting and dizziness was significantly reduced ($P < 0.05$). The combined application of dexmedetomidine and propofol etomidate mixture, the use of lower doses of propofol and etomidate can achieve the same depth of anesthesia, meet the requirements of clinical painless gastroscopy, reduce the incidence of intraoperative body movement and postoperative nausea and vomiting, shorten the time of patients waking and leaving the hospital, and improve the comfort and satisfaction of patients.

To sum up,0.4 g/kg of dexmedetomidine combined with propofol etomidate mixtrue can be used in painless gastroscopy in children, which can reduce the dosage of propofol etomidate, reduce the incidence of intraoperative and postoperative adverse reactions, and shorten the time of patients' resuscitation and withdrawal from hospital. It is a safe and effective new method.

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Journal of Clinical and Nursing Research

Research Article

Association Study between miR-181b rs322931 Polymorphism and Risk of Gastric Cancer

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Abstract: ***Objective:*** To explore the relationship between miR-181b rs322931 polymorphism and the risk of gastric cancer. ***Methods:*** The peripheral venous blood of 172 patients with gastric cancer and 224 healthy controls were collected. The miR-181b rs322931 was typed by TaqMan probe method, and correlation between miR-181b rs322931 and the risk of gastric cancer was evaluated using SPSS software. ***Results:*** The frequencies of miR-181b rs322931 CC, CT, TT genotype, C, and T allele were 61.6, 33.7, 4.7, 78.5, and 21.5% in gastric cancer, and 74.1, 23.7, 2.2, 85.9, and 14.1% in controls, respectively. After the $\chi 2$ test and correction for age and gender, the risk of gastric cancer in carriers of CT and CT/TT genotypes increased by 1.71 and 1.79 times, respectively (CT vs. CC: 95% *CI*, 1.10-2.67, *P*=0.02; CT /TT compared with CC: 95%*CI*, 1.16-2.74, *P*=0.008). Moreover, compared with alleles, the risk of gastric cancer in T allele carriers increased by 1.69 times (95%*CI*, 1.16-2.44, *P*=0.006). ***Conclusion:*** miR-181b rs322931 polymorphism may be one of the susceptibility genes of gastric cancer in the Chinese Han nationality.

Key words: MicroRNA-181b; Single nucleotide polymorphism; Gastric cancer

Publication date: January, 2021
Publication online: 31 January, 2021
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Gastric cancer ranks second among common malignant tumors in China, and its mortality rate ranks the third, which after lung cancer and liver cancer[1]. The incidence of gastric cancer is related to a variety of risk factors, including smoking, drinking, eating fried and preserved foods, helicobacter pylori infection and family history of tumors, etc[2]. However, not all individuals exposed to the above risk factors suffer from gastric cancer, and individuals who are not exposed to the above factors do not suffer from gastric cancer, suggesting that different individuals have different susceptibility to gastric cancer. Single nucleotide polymorphism (SNP) may affect the susceptibility of gastric cancer by affecting gene expression. Recently, studies have shown that different alleles of rs322931 may affect the expression of miR-181a and miR-181b[3], and it has been confirmed that miR-181 is closely related to the occurrence of gastric cancer[4-7]. In this study, a case-control study was conducted to investigate the relationship between the polymorphism of miR-181b rs322931 and gastric cancer in Chinese Han nationality, with the aim of identifying new susceptibility genes for gastric cancer.

1 Materials and Methods

1.1 Research object

Gastric cancer group: a total of 172 cases, inclusion criteria: (1) patients with gastric cancer diagnosed by histopathology; (2) denied family history of tumor; (3) Han nationality in Yunnan. Exclusion criteria: (1) Gastric cancer recurrence; (2) Primary cancer of other organs metastasized to the stomach; (3) Patients with severe heart, lung, liver, kidney and other organ organic diseases. The average age (mean ± standard deviation) was 58.7 ± 12.5 years, and the number of males and females was 117/55, respectively. 82 cases were clinical stage I-II, 90 cases were clinical stage III-IV; 124 cases of high-moderately differentiated carcinoma, 48 cases of poorly differentiated carcinoma; 67 cases with lymph node metastasis, 105

cases without lymph node metastasis.

Control group: a total of 224 cases, inclusion criteria: (1) healthy persons on physical examination; (2) denial of family history of tumor; (3) Han nationality in Yunnan. Exclusion criteria: patients with acute and chronic gastritis. The average age (mean ± standard deviation) was 57.7 ± 9.9 years, and the number of males and females was 157/67, respectively.

After all the study subjects signed the informed consent form, 2-3ml of peripheral EDTA anticoagulated venous blood was collected.

1.2 Main reagents and instruments

The whole blood genomic DNA extraction kit was purchased from Tiangen Biochemical (Beijing) Technology Co., Ltd., and the TaqMan probe (probe number: C_26961572_20) and 2× reaction mixture were purchased from American ABI company, and the ABI 7500 Fast fluorescent quantitative PCR instrument was also a product of American ABI company.

1.3 DNA extraction and miR-181b rs322931 typing

The whole blood genomic DNA extraction kit was used to extract DNA. The TaqMan probe method was used for genotyping miR-181b rs322931. The PCR amplification system was as follows (total volume 10μL): genomic DNA 20ng, 2×reaction mixture 5.0μL, rs322931 probe 0.25μL, sterile deionized water supplement 10μL. The PCR reaction conditions are as follows: 95℃ 10 min; 95℃ 15 s, 60℃ 60 s, a total of 40 cycles, the above procedures are completed on the ABI 7500 Fast real-time fluorescent quantitative PCR instrument.

1.4 Statistical methods

SPSS 13.0 statistical software package was used to process data. The t test or χ2 test was used to analyze the differences in age and gender distribution between the gastric cancer group and the control group. The χ^2 test was used to analyze the correlation between Hardy-Weinberg balance and miR-181b rs322931 and gastric cancer, and the relative risk was evaluated by odds ratio (OR) and 95% confidence interval (CI), $P<0.05$ The difference is statistically significant.

2 Results

2.1 General characteristics of research objects

The general characteristics of gastric cancer group and control group are shown in Table 1. There was no statistically significant difference in age and gender between the two groups. The P values were 0.55 and 0.66, respectively, indicating that the control group and the gastric cancer group were matched in age and gender.

Table 1. General situation of gastric cancer group and control group [*n* (%)]

General situation	Gastric cancer group	Control group	P value
Age (years, mean ± standard deviation)	58.7 ± 12.5	57.7 ± 9.9	0.55
Gender			
male	117 (68.0)	157 (70.1)	0.66
female	55 (32.0)	67 (29.9)	
clinical stage			
I-II	82 (47.7)		
III-IV	90 (52.3)		
Differentiation degree			
high-moderately differentiation	124 (72.1)		
Low differentiation	48 (27.9)		
Lymph node metastasis			
Has	67 (39.0)		
Hasn't	105 (61.0)		

2.2 Correlation between miR-181b rs322931 polymorphism and gastric cancer

The distribution of miR-181b rs322931 genotypes in the gastric cancer group and the control group was in accordance with the Hardy-Weinberg genetic balance, with P values of 0.99 and 0.75 respectively, indicating that there was no selection bias in the two groups, which could represent the population. The correlation between miR-181b rs322931 polymorphism and gastric cancer is shown in Table 2. The frequencies of CC, CT, TT genotypes, C and T alleles in the gastric cancer group were 61.6%, 33.7%, 4.7%, 78.5%, and

21.5%, respectively, and the frequencies in the control group were 74.1%, 23.7%, 2.2%, 85.9% and 14.1%, respectively. After the χ2 test and correction for age and gender, the risk of gastric cancer in carriers of CT and CT/TT genotypes increased by 1.71 and 1.79 times respectively (compare CT with CC, 95% *CI*, 1.10-2.67, *P*=0.02; CT /TT compared with CC, 95%*CI*, 1.16-2.74, *P*=0.008); compared with alleles, the risk of gastric cancer in T allele carriers increased by 1.69 times (95%*CI*, 1.16-2.44, *P* =0.006). The miR-181b rs322931 polymorphism has no correlation with the clinical features of gastric cancer, such as the clinical stage, degree of differentiation, and lymph node metastasis.

Table 2. Correlation between miR-181b rs322931 polymorphism and gastric cancer

rs32293polymorphism	Control group (%)	Gastric cancer group (%)	Correction *OR*(95 % *CI*)	Corrected P value
CC	166 (74.1)	106 (61.6)	1.0	
CT	53 (23.7)	58 (33.7)	1.71 (1.10-2.67)	0.02
TT	5 (2.2)	8 (4.7)	2.57 (0.81-8.13)	0.1
CT/TT	58 (25.9)	66 (38.4)	1.79 (1.16-2.74)	0.008
C allele	385 (85.9)	270 (78.5)	1.0	
T allele	63 (14.1)	74 (21.5)	1.69 (1.16-2.44)	0.006

3 Discussion

Although RNA molecules do not encode proteins, but they are involved in the pathophysiological processes of many diseases as regulatory molecules, including cell proliferation, apoptosis, differentiation, development, metabolism, invasion, migration, and angiogenesis. The miR-181 family includes miR-181a, miR-181b, and miR-181c. Among them, miR-181a and miR-181b are well studied and highly expressed in gastric cancer[4-7]. Compared with clinical stage I-II patients with gastric cancer without lymph node metastasis, the expression of miR-181a and miR-181b in patients with clinical stage III-IV gastric cancer and lymph node metastasis was significantly increased[4]. Overexpression of miR-181a can target autophagy-related genes 5 to up-regulate cell cycle regulatory proteins CDC25A, cyclin A2, and apoptosis-related protein Bcl-2 to promote cell proliferation, inhibit cell apoptosis, and increase S-phase cells[6-8]. On the contrary, low expression of miR-181a can inhibit cell proliferation, promote cell apoptosis, and arrest cells in G_0/G_1 phase[7, 9]. The above results indicate that miR-181 is expected to be used as an auxiliary diagnostic marker for gastric cancer and as a potential drug target for gastric cancer treatment.

A number of studies have confirmed that miRNA related SNPs can affect miR-181 ability to process, mature and bind target genes, resulting in individual differences in susceptibility to gastric cancer.For example, the insertion / deletion polymorphism of TTCA in the 3 'untranslated region of IL-1A, the insertion allele of TTCA, destroys the binding sites of miR-122 and miR-378, increases the transcription level of IL-1 α, and increases the susceptibility to gastric cancer[10]. Rs1056628 A / C single nucleotide mutation located in the 9 3 'untranslated region of matrix metalloproteinase, C allele has weaker ability to bind miR-491-5p, reduced transcriptional activity, and increased risk of gastric cancer[11]. Since miR-181 plays a role similar to oncogene in the evolution of gastric cancer, it is speculated that the genetic polymorphism of miR-181 may be related to the pathogenesis of gastric cancer. In order to verify this hypothesis, a case-control study was conducted to investigate the distribution of rs322931 polymorphism in 172 patients with gastric cancer and 224 healthy controls. It was found that individuals with CT, CT / TT genotype and T allele increased the risk of gastric cancer by 1.71, 1.79 and 1.69 times, respectively. As for the possible reasons, some studies have shown that the expression of miR-181b-5p in rs32293 T allele carriers is significantly increased[3], which suggests that T allele may increase the expression of miR-181b, thereby increasing the risk of gastric cancer. However, the exact mechanism needs to be further confirmed.

In summary, this study analyzed the correlation between the miR-181b rs322931 polymorphism and the incidence of gastric cancer in the Han nationality in China for the first time, and found that individuals carrying CT, CT/TT genotype and T alleles have a significantly increased risk of developing gastric cancer. It may be one of the susceptibility factors of gastric cancer in Chinese Han nationality. Since the sample is limited to the Han nationality and the sample size is small, it is necessary to carry out multi-

ethnic, large sample confirmatory research in the future.

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Journal of Clinical and Nursing Research

Research Article

Practice and New Direction of Promoting the Construction of Managing System of Modern Hospital

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Abstract: If we want to enhance the medical level of modern hospital, we not only need to make the career morality and professional capability of the medical staff, but also require the perfection of the governance institution of hospital in accordance with the development of society. That said, the medical staff will provide the patients with the best service, which is significant to the development of hospital. In addition, every hospital should conduct deepening reform of public hospital comprehensively to respond to call of the government. And the hospital should also put forward professional and comprehensive managing system based on the concrete conditions of the hospital. That is how the hospital can serve the people better. That said, this article focuses on how to promote the system of managing the modern hospital.

Keywords: Modern hospital; Construction of system; Direction of practice; Managing hospital

Publication date: January, 2021
Publication online: 31 January, 2021
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1 Introduction

As China has maintained rapid economic growth, it attaches great importance to reform and develop the public hospital. In terms of the relevant research, there exists some problems in the system of managing the hospital. It will have bad impact on the future construction and development of the hospital, if the problems were not solved in time. Therefore, China has launched a series of documents and strategies for medical reform which is implemented in all the public hospitals all over China. Experimental work has been carried out now and then, which set a good foundation for promoting the construction of national healthcare.

2 Promoting the construction practice of system of managing modern hospital

2.1 We should abide by the guidance of the Party, and promote governing the structure

Every public hospital should sustain the guidance of the Chinese Communist Party and improve the reform of corporate governance, if we want to promote the construction of system of managing the modern hospital in all aspects. That is how all the leaders of hospitals can work and lead the subordinates in the institution. In addition, all the experimental hospitals should sustain the responsibility system of hospital president guided by the Party commission. Experts and medical staff should be fully willing to improve and renew the current decision-making system of Party commission. We should strengthen the construction of leader team, Party members, ideology and politics based on the concrete conditions. When formulating relevant plans, the hospital president must obtain the agreement of all the party committees. The plan can be implemented only after discussions in the meeting. In addition, the president's office needs to regularly submit work reports to the party committee in daily management, giving a full play of academic management, staff management, safety management, equipment management and others. This will put the role of all commissioners into full effect. We will promote the implementation of democratic, scientific and legal decision-making in the hospital. In the process of extending Party unit, every public hospital should strive to improve the role and value

of the units by taking scientific measures to make the Party unit a strong team. It will both improve the united spirit and management of the hospital to better provide patients with premium services.

2.2 We should implement construction of system and improve the medical system

The hospital should arrange a specific training system based on concrete conditions. It should improve the construction of medical system according to the situation of the training class. It will be more scientific and reasonable after supplementing and improving the existing rules and regulations. For example, the Affiliated Hospital of Qingdao University has achieved remarkable results in it. The hospital has categorized five management systems based on the concrete conditions, namely medical quality and security, nursing management, pharmaceutical management, functional management, logistics management, etc., achieving great effect. Its experience deserves to be regarded from. That being said, other hospitals should also learn from that hospital in their daily management. They must formulate scientific, reasonable and more complete management systems and principles in line with national regulations and the requirements of government departments. They should also conduct multi-party research and investigations before formulating targeted regulations of management based on actual needs. In addition, many hospitals attach more importance to issues such as the salary and welfare of medical staff in terms of the construction of management systems, which reform and improve the original allocating system. The hospital should uphold the system that "the employer and employee are choosing each other and the employee get the occupation by competition", and manage in strict accordance with the contract.

2.3 We should both improve the management system and level

To advance constructing management system of modern hospital, we must first improve the refined management level of hospital. The experimental hospitals must give full play to their leading role by strengthening the governance and management of the hospital's economic operation after optimizing its own income structure. We should improve and innovate the current governance of medical quality, while spreading the method of diagnosis and treatment which respond to the actual demand. We will strive to improve the service system that meets the needs of patients and their family members. This will better strengthen the hospital's own service which is convenient to the people. It sets the foundation for the improvement of hospital service quality. For example, a comprehensive management project can be carried out within the hospital; more management rights can be granted to the chief surgeon and operating physician, and a hierarchical management model can be adopted. Different green channels can be set for patients with different needs. We should fully implement Cross-disciplines consultation, emergency follow-up, healthcare for severely ill patients and other contents, and actively communicate with patients. In addition, the hospital should implement the refined management system to provide patients with targeted services and assistance. The precise medical project will be carried out from multiple aspects of reality. Besides, the hospital should make targeted adjustments to the fee structure, expenditure structure, and business structure according to the local economic situation. The HRP online system can comprehensively manage and supervise assets. That is how logistics, capital flow, business flow, and information flow can be fully unified and centrally managed.

3 New directions for advancing the construction of modern hospital management system

The 19th CPC Central Committee at its 4th plenary session pointed out the direction for the construction of system of managing modern hospital. Therefore, the development of the management systems of public hospitals is more mature. Modern management is established and implemented both internally and externally.

3.1 Attaching great importance to tackle new tasks

The implementation of the new medical reform has significantly changed the way of working in hospitals and relevant government departments, but the focus is still limited to medical demand and supply. The reform and implementation of universal medical insurance are relatively neglected, which has seriously affected the management of the modern hospital and the establishment of the system. This

is because hospital reform is a systematic project, and a lot of interest will be involved to adjust in the reform process. Therefore, it has become the most difficult issue in medical reform. The recent years has seen the rapid economic growth. Medical reform in various regions have been continuously advancing. We pose requirements to optimize and improve the management system across the country, striving to improve medical standards and service quality, and minimizing the pressure of the people to see a doctor. Some cities have achieved significant results in terms of medical reform. However, many hospitals still face the situation that medical staff chase after fame and fortune, focusing on economic benefits with unbalanced supply. It makes the task more difficult. That said, we must attach great importance to this by launching a new plan under the health system reform responding to concrete conditions. We should build a new mechanism for the operation of public hospitals, improving the mechanism and the policy from many aspects. This will give the system a full play and promote the long-term development of the hospital.

3.2 Adjusting direction of development by improving technical services

As pollution continues to intensify, epidemics and infectious diseases have become the biggest challenges for hospitals. Coupled with the accelerating speed of population aging, chronic and non-infectious diseases continue to spike, which makes it more difficult and expensive for the people to see a doctor. This makes the traditional and backward medical system unable to catch up with the current social development trend. At this point of the new generation, we need to change the demand of the patients from treatment to keeping health. Hospitals should pay attention to people's quality of life, while clarifying their own responsibilities and obligations. It will transform to a comprehensive service plus medical assistance, striving to improve the medical system and management. With the continuous development of society, the responsibilities and working standards of hospitals are also undergoing different changes. If the hospital wants to become better, it must forge ahead to adjust its orientation, improving its own medical standards, teaching and research and the soft power of medical staff. In this way, it will fundamentally ensure the improvement of the overall work efficiency of community medical institutions.

3.3 Changing payment methods and innovating management models

In terms of the current situation, China has successively implemented measures to decrease the pharmaceutical ingredient, while adjusting and optimizing the price of medical services. After the establishment of the National Medical Security Bureau, we have speeded up the management measures of the medical insurance payment system in various regions. These measures will have a great impact on the development concepts and management models of major hospitals. The reform of compound payment methods involves a lot of content: patients can pay in different groups according to the type of disease during the hospitalization period, and they can pay the fee by person combined with chronic disease management within the hospital. In addition, we must also attach great importance to the promotion and implementation of DRG which is a new and unique payment method. It overturns the traditional profit model of hospitals. Under these circumstances, hospitals must actively change payment methods and then appropriately innovate the management mode of operation, cost control and management process. In addition, the operation and service of the hospital can be effectively evaluated by analyzing DRG. The outdated evaluation system can be changed. In response to this situation, the hospital directors must take precautions to establish a sound management model and method. They should establish a scientific and complete supporting system according to the actual situation of the hospital, fully implementing the various aspects of the work involved. We should also promote the innovation and improvement of management models meeting actual needs to improve service quality. This will make hospitals keep up with the social development.

3.4 Upholding the leadership of the party and optimizing internal and external structures

In terms of the current situation, the public hospitals must uphold the leadership of the Party during the construction and management process, adopting a management mode both internally and externally in accordance with actual needs. In terms of external management, the function of the hospital management committee is mainly put into full effects; As for internal management, the key is the responsibility

system of hospital president led by the hospital party committee. At the same time, the process of formulating the management system must also be based on political responsibility and theory of the Party. The medical staff on the frontline are the main target to led by the Party committee and government, involving the important content and tasks in the assessment of Party committee and government. This not only improve the hospital's awareness of service and medical level, but also provide a strong organizational protection and corresponding reform atmosphere. From an internal point of view, the implementation of the responsibility system of hospital president guided by the party committee in modern hospitals is a brand-new system reform. If we want this system to be better promoted, it is necessary to uphold the leadership of the party and establish a good image of party building within the hospital. On the one hand, the party committee must take charge of the overall situation, paying attention to prominent issues to promote the overall development of the hospital. On the other hand, we will make great efforts to realize the management mode that combines ideological construction and business development by integrating Party constrution into all the work of the hospital.

4 Conclusion

All in all, if medical institutions want to achieve better development and keep up with the social growth in the new era, we must not only improve our own medical standards and professional capabilities, but also need to innovate and improve the existing management model in all aspects based on social development and the actual situation of the hospital. This will promote the development of the hospital comprehensively plus improving service awareness so that patients can truly receive the premium service of the hospital.

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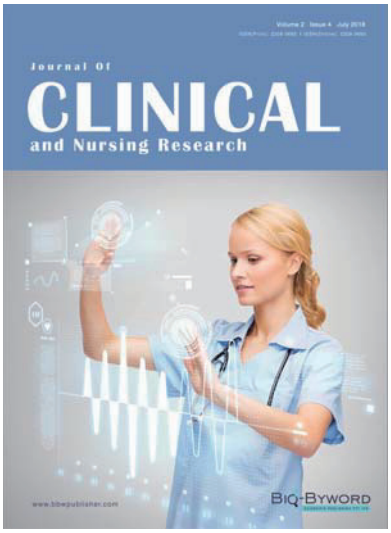

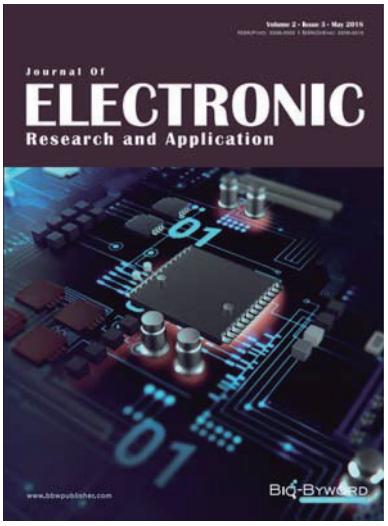

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