Construction of medical risk management system for treating anorectal diseases with integrated traditional Chinese and Western medicine

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Abstract: Anorectal disease is a very common disease in medical clinics. It contains a wide range of conditions, including anal fissure, anal fistula, acne and colorectal cancer. With the continuous development of society, the medical level of human beings has also been greatly improved. People have gradually learned a lot about anorectal diseases and are paying more and more attention to anorectal diseases. This paper starts from the perspective of “integration of Chinese and Western medicine”, starts with an overview of medical risks, and uses analytic hierarchy process and qualitative analysis to analyze the status quo and construction principles of medical risk management system for anorectal diseases, and to summarize the practices worthy of reference or reference at home and abroad. Methods, summed up the shortcomings in the construction of medical risk early warning system for anorectal diseases at home and abroad, and put forward the construction ideas of medical risk early warning system. Make full use of information technology to mine data indicators, establish a timely, effective and practical early warning system for anorectal diseases, and explore the safeguard measures for the construction of risk warning systems. It can not only provide hospital administrators with risk management ideas and decision-making suggestions for anorectal diseases, but also conduct risk assessment for patients with anorectal diseases admitted to the hospital, and control risks in real time to prevent or reduce medical disputes, which is of great significance for relieving contradictions between doctors and patients.

1. Introduction

With the development of social economy and people's demands for quality of life, the reform of the health system has continued to deepen, and medical risks have become the focus of the society. “Medical risks are everywhere” has become the consensus of the medical community[1]. As a high-risk industry, how to prevent medical risks and establish medical risk warning mechanisms is also an important task for health departments at all levels. At present, China is in the reform period of the health and medical system, combining the characteristics of traditional Chinese medicine with the advantages of Western medicine, and other strategic themes and policy declarations. The idea of integrating Chinese and Western medicine is better integrated into the health services and management of the people. Anorectal disease is more common in the clinic and is a multiple disease. According to the data, the incidence of the disease is higher in the 16-60 age group, the incidence rate is about 59%. After the patient undergoes surgery, the postoperative period will be There are obvious pains, which lead to a decrease in quality of life and a certain impact on wound healing. It may result in unsatisfactory surgical results[2]. How to achieve satisfactory treatment results for surgical treatment of this type of disease has become the focus of attention. In the course of medical development in the past half century, no matter in technical innovation or clinical diagnosis and treatment, the overall treatment of anorectal diseases has made great progress, especially in the treatment of traditional Chinese medicine. In the application of therapeutic methods, the tradition is constantly being Breakthrough[3]. However, in the process of treating anorectal disease, it is difficult to make the disease only by using a single treatment. In order to alleviate postoperative pain, timely and effective treatment of integrated Chinese and Western medicine treatment and care is essential to alleviate the suffering of patients. Any activity in the hospital will bring

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corresponding risks, the risks can come from registration, inspection, diagnosis, In any part of the process of treatment, prognosis, etc., the risk influencing factors are very complicated[4]. The medical service industry is different from other industries in that it is an unknown exploration, a high-risk, high-difficult, high-tech industry, and effective risk management. It is the key to ensuring the safety of patients and the development of medical institutions[5]. This paper starts from the contradiction between doctors and patients, and explores the mechanism of medical risk management and the measures to control risks by exploring the theory, model or case of medical risk management. Provide reference or advice on the construction of an early warning system for anorectal diseases.

2. A Summary of Research on Medical Risk Management

2.1 Related concepts of medical risk management

2.1.1 Content of medical risks

Medical malpractice. Medical malpractice refers to a negligent accident caused by medical personnel in violation of medical regulations and medical laws and regulations in the medical process, which seriously threatens the personal safety of the patient. Specifically, the main body of medical malpractice must be medical personnel and medical institutions[6]. And medical behavior is illegal and has a causal relationship with the patient's personal injury. In addition, medical staff or medical institutions must be subjectively at fault.

Medical Dispute. Medical disputes mainly refer to the analysis of medical consequences and causes by both doctors and patients, and the parties propose compensation or responsibility. Medical disputes are not allowed to pass administrative or legal adjustments or administrative legal decisions[7]. In general, medical disputes usually occur after treatment activities and may also occur in medical activities.

Medical accident. Medical accidents mainly refer to adverse medical consequences due to irresistible or unpredicTable causes; finally, complications. During the medical process, the patient is likely to have unavoidable adverse consequences due to his own physical reasons.

2.1.2 Medical risk management, monitoring and early warning

Medical risk management includes management of medical institutions and practitioners, management of pharmaceutical equipment, risk management education, risk definition and control after accidents, and process monitoring of risk transfer.

Medical risk monitoring is an effective way to detect links or process errors in a timely manner and is the basis for correcting errors[8]. At present, the monitoring that has been carried out in China includes clinical application monitoring of antibacterial drugs, monitoring of bacterial resistance, monitoring of nosocomial infections, monitoring of adverse drug reactions, monitoring of adverse reactions of medical devices, and monitoring of adverse events. Proactively collect, analyze, organize, and forecast the likelihood or risk factors affecting medical quality and patient safety and health during medical services (medical activities), providing warnings, countermeasures, and recommendations for managers and providers of medical services[9]. For example, research and analysis of medical accident-related information, understanding medical disputes, susceptibility factors, weak links, high-risk areas and populations; issuing warning information to medical institutions and medical personnel, so as to take effective measures to avoid recurrence of similar situations .

The medical risk early warning system is a key component of risk management, providing a basis and path for risk management[10]. The so-called medical risk warning is mainly to implement dynamic monitoring of the whole process of medical services, and to analyze, predict and alarm all unsafe incidents such as medical accidents, medical disputes, medical accidents and complications.

2.2 Characteristics of medical risks

1) Medical risks have objective characteristics and exist along with medical behaviors, which is

an objective necessity. Although medical institutions can use advanced technologies and means to reduce medical risks, they cannot eliminate medical risks;

2) Medical risks are uncertain. In the medical process, medical personnel, medical equipment, medical services, patients and other factors can cause medical risks. Therefore, it is difficult for medical institutions to accurately determine medical risks before medical activities;

3) Medical risks are highly harmful. Once medical risks occur, they will not only endanger the life and health of patients, but also have great harm to medical personnel, medical institutions and government administrative departments;

4) The medical risks are characterized by complexity, and the factors causing medical risks are not single. Medical risks are affected by many complicated factors, and even affected by unknown factors;

5) Medical risks are characterized by unevenness. Due to the different occupational resources of different regions, some economically backward areas have fewer medical resources and lower medical standards, which are more prone to medical accidents and higher medical risks.

3. Feasibility analysis of the construction of medical risk management system in China

(1) Analysis of the construction of medical risk management system

It can be seen from Table 1 that the medical risk management system for anorectal diseases in Group A hospitals is better, and more than 75% of hospitals have established relatively sound risk management systems; 61.95% of hospitals in Group B have management objectives and specializations. Institutions and personnel, but the system design and plan for the risk management of anorectal diseases are relatively lacking; from the situation of Group C, the construction of the risk management system for anorectal diseases is not comprehensive enough and needs to be strengthened.

Table 1 Comparison of the construction of medical risk management system

Group	Set risk management goals(%)	Configuring specialized agencies and dedicated staff(%)	Develop a risk management process (%)	Implement management systems such as information collection and analysis(%)	Implementation of information mandatory reporting system(%)	Develop a risk plan (%)
A	78.27	100	86.89	86.89	91.25	91.25
B	73.52	78.95	63.11	62.11	57.37	63.17
C	76.67	59.33	42.11	53.33	66.67	73.37

(2) Analysis of factors affecting medical risks

The pain scores of the two groups before and after treatment were not significantly different by comparing the pain scores of the two groups before and after treatment. The pain scores of the two groups were significantly lower after treatment, and there was a statistically significant difference compared with before treatment (P <0.05), and the observation group was significantly lower than the reference group (see Table 2).

Table 2 Comparison of pain scores before and after treatment in patients with anorectal diseases

Group	Before treatment	After treatment	*t*	P
Observation group	8.78 ± 3.23	2.01 ± 1.02	9.987	〈 0.05
Reference group	8.93 ± 3.76	4.23 ± 1.57	5.767	〈 0.05
t	0.151	5.928	/	/
p	〉0.05	〈 0.05	/	/

This shows that the main reasons for the medical risks of anorectal diseases caused by medical staff (see Table 3), most of the three groups are concentrated in “the medical staff's service awareness is not strong, attitude is poor.” Secondly, the two groups A and C also favored “the medical staff's responsibility is poor, not careful, there is negligence”; while the B group is biased “the lack of legal awareness of medical staff and neglect the legitimate rights and interests of patients”, thus confirming the “medical staff service” The lack of awareness and lack of sense of responsibility is the most important cause of medical risks. In addition, it can be seen from the Table that large hospitals are obviously better than small and medium-sized hospitals in terms of “the basic skills of medical staff are not solid, the technical level is poor” and “not strictly adhere to the medical treatment process”.

Table 3 Comparison of the main causes of medical risks of anorectal diseases caused by medical staff

Influential factors in medical staff	A(%)	B(%)	C(%)
Service awareness is not strong	38.89	32.58	55.33
Basic skills are not solid, technical level is poor	11.11	16.79	6.67
Lack of responsibility, carelessness, negligence	33.33	0	20.00
Driven by interest, overtreatment, etc.	5.56	15.79	0
Did not strictly abide by the diagnosis and treatment procedures	5.56	10.53	13.33
Lack of legal awareness and neglecting the legitimate rights and interests of patients	5.56	26.32	6.67

The results of this study showed that the postoperative pain scores of the observation group that started with integrated Chinese and Western medicine treatment were significantly lower than those of the reference group treated with western medicine alone ($P<0.05$); the total effective rate of the double-check group (91.30%) was also significantly higher than the reference group (76.09%), and the difference was statistically significant ($P<0.05$). It can be seen that anorectal disease is a common disease in surgery, its incidence is high, and the type of disease is complicated. It is predictive and evaluated before the medical risk occurs, and corresponding preventive measures are taken according to the predicted evaluation results, so as to be effective. Reduce the occurrence of medical risk events.

4. Construction of Medical Risk Management Index System of Integrative Medicine for Anorectal Diseases

4.1 Medical Risk Management Indicator Selection

1) Principles for selecting risk management indicators

① Systematic principle: Each index strives to reflect the risk of hospital medical services from a certain aspect. Each indicator complements each other and truly reflects the correlation of each indicator to risk, and strives to select a comprehensive indicator as a whole. Respond to the risks faced by hospital medical services;

② Sensitiveness principle: There is a sensitive correlation between early warning indicators and potential risks of medical services;

③ Normative principles: The data source of the risk warning system is reliable and reliable, and the reasoning process is scientific and reasonable, and has strong operability;

④ Dynamic principle: According to different regions, different stages and different periods, as well as the size and characteristics of the hospital, appropriate indicators should be adjusted to meet the early warning of hospital medical risks in different periods and situations.

2) Preliminary selection of indicators

Using the search platforms of PubMed, OVID, and Proquest databases, enter keywords such as “Medical Quality”, “Risk Management”, “JCIA”, “IQIP”, “ISO9000”, and search the research

literature for nearly fifteen years. The literature related to medical quality risk management was screened out; the documents of JCIA (JCAHO) and QIP hospital evaluation system were reviewed, and the theoretical basis for establishing a medical quality risk management index system was obtained through refining.

4.2 Determination of indicator weight

This paper uses AHP to determine the weight of indicators. After in-depth analysis of the problems faced, the complex problems are decomposed into the various components of the elements, and different levels are formed according to the interrelationships and subordination between the elements, such as the target layer, the sub-target (criteria) layer, and the solution layer. The hierarchical level relationship can be illustrated in the form of block diagram 1.

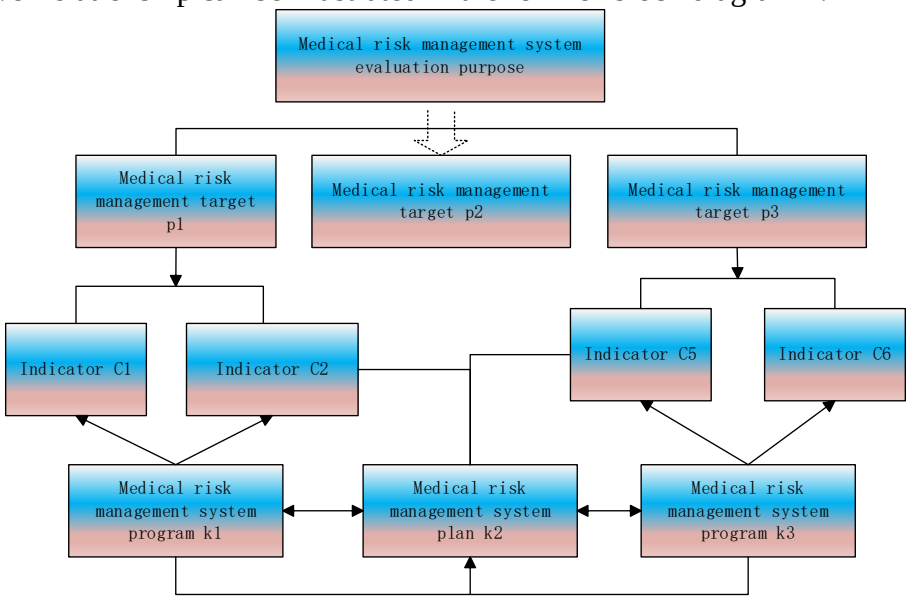

Figure 1 Medical quality risk management system

For n elements, a comparison judgment matrix $A=(a_{ij})n*n$ is obtained, where a_{ij} is the importance value of the factor i and the factor j with respect to the target. The matrix A (positive reciprocal matrix) has the following properties:

Among them $a_{ij}=1, a_{ij}=\frac{1}{a_{ij}}(i\neq j), a_{ij}=a_{ik}*a_{kj}$,calculate the one-time indicator Ci as

$$CI=\frac{l_{\max}-n}{n-1} \tag{1}$$

$$L_{\max}=\frac{1}{n}\sum_{i=1}^{n}\frac{\beta a_{ij}w_j}{w_i} \tag{2}$$

$CR=\frac{CI}{RI}$, when $CR\langle 0.1$, it is considered that the consistency of the judgment matrix is accepTable, otherwise the judgment matrix needs to be adjusted to have satisfactory consistency. which is:

$$W_i=\left(\prod_{j-1}^{\pi} ya_{ij}\right)^{\frac{1}{n}} \tag{3}$$

$$W_i^0 = \frac{w_i}{y \sum_i \beta w_i^0} \quad (4)$$

4.3 Application of medical risk management indicator system.

In order to test this risk warning system, this paper takes the data of anorectal diseases from January 1, 2018 to December 31, 2018 in a city's top three hospitals as the actual survey object, collects the index data, and substitutes the risk value calculation formula. The medical quality risk value R is 0.2706. Because R<0.35, the medical risk status of anorectal diseases in this hospital is a green warning. According to field research, the hospital's annual medical accident compensation percentage was 0.43‰, and the percentage of medical accident compensation in the past three years was about 0.43‰-0.45‰, which was lower than other hospitals of the same scale, so it also came from another side. The validity of the study was verified. The construction of medical quality risk early warning system not only provides a basis for the development of medical quality risk management theory, but also has certain guiding significance for hospital medical risk management practice activities.

5. Conclusions

In summary, the application of integrated Chinese and Western medicine treatment to patients with surgical treatment of anorectal diseases can significantly reduce the incidence of postoperative adverse reactions, effectively alleviate postoperative pain, and has a good clinical therapeutic effect, which is worthy of clinical application. Promotion. Constructing a medical risk management system is an important way to prevent medical risks and strengthen medical quality management. Many hospitals actively construct a medical quality risk early warning system to prevent medical risks. However, the construction of the medical risk management system for anorectal diseases is not perfect at this stage, and more hospitals are needed to actively explore scientific framework strategies and safeguard measures. Because the construction of the medical risk management system for anorectal diseases can not only effectively prevent medical risks, but also has a profound significance for the improvement of medical quality of anorectal diseases.

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