

The Application of TCM's "Preventive Treatment of Diseases" Concept in Daily Hospital Infection Management

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Abstract: With the development and popularization of modern medicine, the importance of daily hospital infection management has been continuously enhanced, making it a key approach to improving hospital safety standards and safeguarding patients' lives. This paper explores the core connotation of the "Preventive Treatment of Diseases" concept in Traditional Chinese Medicine (TCM) and integrates it into the practice of modern hospital infection management. On one hand, it analyzes the current dilemmas in daily hospital infection management from dimensions such as frequent personnel flow, difficulties in disinfection and isolation, risks of antimicrobial abuse, and limited awareness of medical staff. On the other hand, it proposes the application scope of TCM's "Preventive Treatment of Diseases" concept from aspects including preventive culture, environmental infection control, early warning mechanisms, and health education. Based on this, a more forward-looking, systematic, and humanistic hospital infection management system is constructed to achieve the transformation from passive response to active intervention.

Keywords: Traditional Chinese Medicine (TCM); "Preventive Treatment of Diseases" concept; Hospital infection management

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1. Introduction

Hospital infection management is the guarantee of medical quality and the prerequisite for patient safety. Particularly in maternal and child health institutions, pregnant and lying-in women are in a special physiological stage, while newborns have not yet established a sound immune system, both groups belong to the population vulnerable to infections. Thus, the significance of infection management is even more prominent. At present, China's hospital infection management model mainly relies on "monitoring, isolation, and disinfection technologies" as basic means, which have achieved remarkable application effects. However, this infection management model also faces challenges such as high costs, the emergence of drug-resistant bacteria, and passive response. Against this background, this paper introduces TCM's "Preventive Treatment of Diseases" concept,

and through prevention and intervention before the occurrence of diseases, constructs a daily hospital infection management paradigm featuring “prevention first” and “prevention is more important than treatment,” so as to open up new ideas for improving the hospital’s infection control level.

2. Overview of TCM’s “Preventive Treatment of Diseases” concept

TCM’s “Preventive Treatment of Diseases” concept refers to taking corresponding measures in daily work to prevent the occurrence and progression of diseases in advance ^[1]. This concept can be analyzed from three dimensions. The first is “prevention before disease onset”, which means improving patients’ ability to resist diseases and reducing infection risks through methods such as “enhancing physical fitness, regulating mental state, maintaining a reasonable diet, and adapting to the environment” before a disease occurs, so as to achieve the effect of universal prevention. The second is “prevention of disease progression after onset”, which involves avoiding the in-depth development and transmission of diseases through “early diagnosis and early treatment” in the initial stage of a disease, thereby realizing the infection management goals of “early detection, early reporting, early isolation, and early treatment”. The third is “prevention of recurrence after recovery”, which refers to preventing disease recurrence through “scientific nursing and consolidating curative effects” after a disease is cured; under the infection management model, this can be achieved by providing “rehabilitation guidance and follow-up” to discharged patients and those who have recovered from infections, so as to prevent secondary infections or their transformation into infection sources.

3. Dilemmas in daily hospital infection management

3.1. Specificity of the population and complexity of environmental management

From the perspective of patients, most patients are in a period of weak immunity and resistance due to disease invasion or other physiological reasons during hospitalization, making them more prone to infections. Especially in maternal and child health hospitals, pregnant and lying-in women have significant differences in their endocrine systems compared with usual times, and their immune systems are in a sensitive period, so they are typical vulnerable groups ^[2]. At the same time, newborns have not yet established a sound skin protective barrier and self-immune system, and are highly sensitive to various pathogenic bacteria.

From the perspective of the environment, hospitals have a variety of patients, and there are also family visits, which pose a high risk of cross-infection. In maternal and child health hospitals, areas such as delivery rooms, neonatology departments, and mother-and-baby rooms have higher requirements for the environment. This requires hospitals to establish a more complete infection management mechanism to avoid the formation of high-risk infection areas.

From the perspective of management, infection management work needs to find a balance between disinfection and isolation systems and humanistic care culture. It is necessary to achieve the due infection prevention effect while making patients and their families feel the hospital’s humanized services.

3.2. Challenges in the rational use of antibacterial drugs

With the overuse of antibacterial drugs, hospitals currently face the problem of an increase in drug-resistant bacteria, which further increases the difficulty of infection management work. On one hand, some hospitals have

the wrong idea of confusing treatment with prevention. The preventive use of antibacterial drugs is common, but the “indication grasp, drug selection, and course duration” of drugs have not been scientifically determined ^[3]. Irregular use is more likely to lead to flora imbalance and the emergence of drug-resistant bacteria.

On the other hand, the excessive use of broad-spectrum antibacterial drugs has led to the widespread emergence and spread of drug-resistant strains such as MRSA and ESBLs in hospitals, which further increases the difficulty of treating infected patients ^[4].

3.3. Limitations in medical staff's concepts and behaviors

In daily hospital infection management, medical staff also have certain issues with conceptual cognition and limitations in behaviors. From the perspective of cognitive bias, some medical staff regard infection control management as the full-time responsibility of the “infection control department”. They lack the awareness to take the initiative to participate in relevant actions, fail to establish the self-role positioning of “everyone is an infection control practitioner”, and do not proactively learn or understand relevant knowledge, this leads to their failure to implement infection prevention measures throughout all aspects of daily work.

From the perspective of behavioral compliance, medical staff currently face high work intensity. Some of them compromise on basic systems such as aseptic operation and hand hygiene maintenance in clinical work, and fail to attach importance to infection prevention-related rules and systems in all details.

From the perspective of staff training, hospitals at this stage mainly focus on publicizing relevant rules and regulations in infection control training, and adopt a single-form training model. This not only makes it difficult to correct the wrong cognition of some medical staff, but also fails to cultivate their sense of self-discipline and responsibility, and struggles to establish their belief in infection prevention.

3.4. Passivity and lag of the monitoring and early warning system

Monitoring and early warning are the basic means to achieve the goals of hospital infection management, but the existing monitoring and early warning system has problems such as passivity and lag.

First, its monitoring behavior is passive. Most of the existing infection monitoring work adopts a post-event review method. Intervention measures are only taken immediately when infection cases are found, resulting in the lack of preventive effect.

Second, its early warning effect is poor. Currently, hospitals have not established a risk factor monitoring and investigation system in infection management work. This makes it impossible for hospitals to timely understand the risk factors faced by infection control work, and thus unable to establish a forward-looking early warning system. For example, no real-time monitoring platform for patient information has been established, making it impossible to obtain real-time information such as patients' nutritional status, stress level, and environmental microbial data ^[5]. As a result, the “pre-disease” signs cannot be incorporated into the early warning system.

Third, its data application effect is not good. Hospitals do not conduct in-depth analysis of the monitoring data of patients and hospital environment. Most of them only use the data change rate as a reference value, fail to deeply explore characteristics such as its occurrence trend and development law, and even do not give play to the auxiliary advantages of big data and artificial intelligence technology.

4. Application strategies of TCM’s “Preventive Treatment of Diseases” concept in daily hospital infection management

4.1. Constructing an infection control culture system of “Prevention Before Disease Onset”: strengthening “Righteous Qi” and “Pathogen Prevention”

For daily hospital infection management, it is not an exclusive responsibility of the hospital’s infection control department, but a systematic and regular project involving all medical staff in the hospital. Guided by TCM’s “Preventive Treatment of Diseases” concept, hospitals should start from top-level design and give priority to building an infection control culture system of “prevention before disease onset”, so as to help medical staff correct their cognition and attitude and participate in infection management work collectively.

First, for medical staff, a comprehensive infection control training system based on the “Preventive Treatment of Diseases” concept should be established. Through special courses, online expert lectures, infection control common sense education, and reforms of assessment and incentive mechanisms, medical staff can fully recognize the importance of infection control work, and consciously maintain correct and scientific behavioral habits in daily work ^[6]. This elevates infection control to the level of medical ethics and professional honor, and guides medical staff to develop the proactive awareness of “I need to do infection control”.

Second, for patients and their families, a systematic health education system should be established, with TCM health preservation concepts integrated into it. Taking maternal and child health hospitals as an example, in addition to conducting daily anti-infection behavior education and standardized guidance, medical staff can also guide pregnant women to maintain a reasonable diet to achieve the goal of “nourishing qi and blood”, and help them “regulate qi movement” by relieving emotions, so as to enhance patients’ anti-infection ability and physical fitness ^[7].

Third, it is necessary to establish the infection control culture system and management measures of “prevention before disease onset”. On one hand, infection control behavior indicators such as hand hygiene compliance rate should be linked to the performance of departments and individual medical staff; medical staff with poor daily performance should be penalized and provided with training. On the other hand, an honorary selection mechanism such as “Infection Control Model” should be established: medical staff who excel in implementing daily infection control behaviors should be awarded honors and bonuses, and a positive preventive culture atmosphere should be created through daily promotion and guidance ^[8].

4.2. Implementing precise intervention measures of “Preventing Disease Progression After Onset”: Achieving “Early Detection” and “Prevention of Transmission”

Daily hospital infection management cannot completely eliminate infection issues. Therefore, when infections occur, medical staff should adhere to the concept of “preventing disease progression after onset” and achieve the goals of “early detection” and “prevention of transmission” through precise intervention measures. Under the guidance of TCM’s “Preventive Treatment of Diseases” concept, hospitals should thus prevent the spread and deterioration of infections through improved identification, management, and intervention methods.

First, an early identification mechanism should be established. Hospitals should refer to TCM’s diagnostic methods of “observation, auscultation & olfaction, inquiry, and pulse-taking” to guide all medical staff in enhancing their sensitivity to early infection signals and symptoms. For example, in maternal and child health hospitals, medical staff should observe parturients’ lochia and tongue coating daily, proactively listen to newborns’ cries and breathing sounds, and understand patients’ discomfort through inquiries, all to detect early signs of

infection in a timely manner^[9].

Second, a hierarchical management mechanism should be established. Hospitals should classify patients' infection risks and develop corresponding assessment systems. Taking maternal and child health hospitals again as an example, pregnant and lying-in women with high-risk factors such as advanced age, cesarean section, malnutrition, and use of immunosuppressants should be identified as key groups for "preventing disease progression after onset," and a more comprehensive and strict monitoring and intervention system should be established specifically for this group^[10].

Third, a rational medication mechanism should be established. The overuse of antibacterial drugs continuously increases the difficulty of hospital infection management; thus, hospitals should also introduce TCM's "syndrome differentiation and treatment" concept to optimize the antibacterial drug management mechanism. On one hand, it is advisable to advocate the combination of TCM methods when antibacterial drugs are used with clear indications, while eliminating and cleaning harmful bacteria, probiotics should also be cultivated to "strengthen the body's vital qi and consolidate the root"^[11]. On the other hand, a sound regulation for antibacterial drug use should be established, setting restrictive conditions for the use of antibacterial drugs at different levels. Through control measures such as time intervals, dosage, and application areas, the risks of flora imbalance and secondary infections can be reduced^[12].

4.3. Optimizing infection control environment management based on "Harmony Between Human and Nature": Achieving "Alignment with Seasons" and "Avoidance of Impurities"

Infection control environment management is a key component of daily hospital infection management. Hospitals should center on TCM's "Preventive Treatment of Diseases" concept and establish an environmental management strategy based on "harmony between human and nature".

First, optimize the environmental layout and ventilation design. Hospitals should adjust ward layouts to ensure good indoor lighting and ventilation. Meanwhile, during seasonal transitions or peak influenza periods, regular disinfection should be conducted in wards using TCM herbal air fumigation, which optimizes the environment in a relatively gentle way^[13].

Second, apply appropriate TCM techniques. Hospitals can recommend or provide TCM anti-epidemic sachets to all medical staff and infection-vulnerable patients, or conduct interventions through non-pharmaceutical methods such as drinking TCM preventive herbal infusions. These measures supplement and improve standard protective methods.

Third, establish a microenvironment control mechanism. Hospitals should use modern microbial monitoring technology, integrate TCM's "Five Elements and Six Climates" theory, and conduct in-depth research on the growth rules and spread paths of pathogenic microorganisms in hospitals under different climatic conditions^[14]. On this basis, a forward-looking environmental disinfection and sterilization mechanism can be established.

4.4. Establishing a whole-process management model of "Prevention of Recurrence After Recovery": Focusing on "Strengthening Vital Qi" and "Preventing Recurrence"

The "Preventive Treatment of Diseases" concept in Traditional Chinese Medicine (TCM) not only emphasizes early prevention before the onset of disease, but also focuses on secondary protection after recovery. Therefore, in daily hospital infection management, a whole-process management model for "prevention of recurrence after recovery" should also be established.

First, establish discharge guidance standards. For patients discharged after recovering from infections, hospitals should provide personalized TCM rehabilitation guidance and education. For example, for parturients with wound infections or mastitis, a guidance manual and courses covering “dietary regulation, emotional adjustment, and simple acupoint massage” can be provided to help them recover quickly^[15].

Second, establish a follow-up monitoring mechanism. Follow-up files should be created for patients discharged after infections, and their recovery effects should be tracked and observed through methods such as phone calls and WeChat, while answering patients’ questions.

Third, pay attention to the health of medical staff. Hospitals should establish health records for employees, and in particular, provide TCM health consultation and conditioning support for overworked medical staff to reduce their risk of infection.

5. Conclusion

In summary, TCM’s “Preventive Treatment of Diseases” concept is a kind of preventive wisdom, which provides important theoretical guidance for modern hospital infection management. Integrating the “Preventive Treatment of Diseases” concept into daily hospital infection management can not only improve the existing infection control technology system, but also establish an active health management system featuring the harmony of “human-machine-environment”. In addition, TCM’s “Preventive Treatment of Diseases” concept also has higher humanistic care and practical value, and it is an inevitable trend to build a more resilient and high-quality hospital infection prevention and control system.

Disclosure statement

The author declares no conflict of interest.

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