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Contents

Research Article

Review

Isolates of Cryptococcus Neoformans from Non-HIV and Non-Transplant Hospitalized Patients

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Abstract: A retrospective cross-sectional study for patients with confirmed Cryptococcus neoformans meningitis (CM) in non-HIV-infected and non-transplant hosts in two class-A tertiary hospitals in Guangzhou, China is reported. 181 CM patients were enrolled during the study period, 48% (87/181) of which died. Underlying diseases were risk factor associated with higher mortality, among which diabetes mellitus ranked first for the incidence of CM. The mortality was not related to antifungal drug susceptibility. All strains were considered susceptible to amphotericin B, although interpretative breakpoints for amphotericin B have not yet been established. According to the CLSI guidelines, most of the strains in our study were susceptible to voriconazole, fluconazole, fluorocytosine and dose-dependently susceptible to itraconazle.

Keywords: Cryptococcus neoformans; Drug resistance; Nosocomial infection

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1. Introduction

Cryptococcus neoformans is a ubiquitous encapsulated human yeast pathogen causing infections ranging from asymptomatic pulmonary colonization to the life threatening meningoencephalitis, mainly in patients with cellular immune defects, such as those with acquired immunodeficiency syndrome (AIDS).[1] This pathogen is estimated to cause one million annual cases globally and nearly 625,000 deaths/year.[2] It has been well reported that Cryptococcosis frequently occurs in two risk groups: 1) human immunodeficiency virus (HIV)–infected individuals, 2) organ transplant recipients. However, we report a retrospective cross-sectional study for patients with confirmed Cryptococcus neoformans meningitis (CM) in non–HIV-infected and non-transplant hosts in two class-A tertiary hospitals in Guangzhou, Guangdong, China.

2. Methods

2.1 Patients

Patients were from the Third affiliated hospital of Zhongshan university and the Third affiliated hospital of Southern medical university, both of which are tertiary medical center located in Guangzhou, the largest city in south China. Cryptococcal antigen was measured in serum and CSF samples using IMMY CrAg® LFA Cryptococcal Antigen Lateral Flow Assay (Immuno-Mycologics, USA). During the period from January 2011 to May 2015, patients diagnosed with CM were recruited in this study. CM diagnosis was established on the basis of the presence of symptoms and/or signs of meningitis, and a CSF positive for India ink. Brain computed tomography and/or magnetic resonance imagings were performed dependent on the physician's decision. Medical records for all CM cases were manually reviewed. Only the first CM episode of each

patient during the study period was included for statistical analysis. We excluded the patients presented any of the following features: HIV-positive, incomplete data.

2.2 Microbiological Testing of Cryptococcus Isolates

Cerebrospinal fluid (CSF) samples were collected for white blood cell counts, glucose and protein concentrations, India ink stain and culture. The CSF and blood specimens were cultured using the BACTEC 9120 system (Becton Dickinon, USA). When the system notified the presence of presumptive positive vials, a gram staining was performed and a yeast-like organism was observed. Identification was performed by culture on Sabouraud agar plates and analyzed using MicroScan walkAway-96 (Siemens AG, German). The drug susceptibility tests were accomplished using Biomerieux (France) yeast susceptibility cards. Briefly, after incubation on Sabouraud agar plates at 35°C for 72 h, the standardized 2.0 McFarland inoculum suspension was prepared and placed into a yeast susceptibility test card for each organism. The yeast suspensions were diluted appropriately, after which the cards were filled, incubated, and read. The time of incubation varied from 12 to 24 h, based on the rate of growth in the drug-free control well. The drug susceptibility was expressed as minimal inhibitory concentration (MIC) in micrograms per milliliter. Quality control was conducted by testing the strains C.parapsilosis ATCC 2209 or C. krusei 6258 as recommended by CLSI. These isolates were tested between 21 and 26 times in the two laboratories, and all MICs were in the reference ranges respectively.

3. Statistics

The X2 or Fisher's exact test was employed for comparisons of attribute data between groups using the software SPSS (version 17).

3.1 Results

181 CM patients were enrolled during the study period, of which 87 were male and 57 were female. The age of patients ranges from 13 to 74 years old (Table 1). Before admission, of the CM patients, 84/181 (46.4%) had fever and 31/181 (17.1%) had cough. Forty-eight (26.5%) patients had diabetes mellitus, 36 (19.9) were diagnosed hepatitis and 23 (12.7%) were receiving anti-tuberculosis therapy (Table 2). Among thirty-seven (20.4) patients, no underlying disease was found. Although CM was diagnosed in 7 HIV-positive patients, these patients were excluded in this study. Because when HIV positive was confirmed, the patients were routinely transferred to specialized infectious diseases hospital, so the data associated with HIV-positive patients in these two hospitals were not typical.

Table 1. Age of Patients

Age (years)	n=181 (%)
<19	22 (12.2)
19 - 45	48 (26.5)
45 - 65	93 (51.4)
>65	18 (9.9)

Table 2. Distribution of Cryptococcal Meningitis in Terms of the Underlying Diseases

Underlying disease	n = 181 (%)
Diabetes mellitus	48 (26.5)
Hepatitis	36 (19.9)
Tuberculosis	23 (12.7)
Renal diseases	16 (8.8)
Autoimmune diseases	13 (7.1)
Malignancies	8 (4.4)
non-basic disease	37 (20.4)

Table 3. A total of 234 Isolates Were Recovered and Tested for Drug Susceptibility from 181 Patients

	N=234(%)		
	R	I	S
5-flucytosine	10 (4.3)	12 (5.1)	212 (90.7)
Lipid-amphotericin B	0	0	234 (100)
Fluconazole	14 (6.0)	32 (13.7)	188 (80.4)
Itraconazole	32 (13.8)	79 (33.8)	123 (52.6)
Voriconazole	4 (1.7)	3 (1.2)	227 (96.9)

Notes: *R, Resistant; I, Intermediate; S, Sensitive.*

In this study, 48% (87/181) of CM patients died. Underlying diseases were risk factor associated with higher mortality. More patients in the underlying diseases group had fever than those in the non-underlying diseases group. The mortality was not related to antifungal drug susceptibility. And there was no difference in chest imaging. Table 4 summarized the major clinical findings in both groups of patients with and without underlying diseases.

Table 4. Comparison of Clinical Characteristics between CM Patients with and without Underling Diseases (%)

Varialbes	with underlying diseases (n=144)	non-underlying diseases (n=37)	P
CSF CrAg positive	53/68(77.9)	14/25(56.0)	0.251
Fever	73/144(50.7)	11/37(29.7)	<0.001
Cough	23/144(16.0)	8/37(21.6)	1
Chest CT positive	113/144(78.4)	28/37(75.7)	1
Survival	71/144(49.3)	23/37(62.2)	0.037

3.2 Discussion

We used clinical data and isolates collected in two class-A tertiary hospitals in Guangzhou city of Southern China to analyze Cryptococcus distribution in the medical settings and the clinical presentations. Left untreated, CM is a uni-

formly fatal disease, even with antifungal treatment. The prognosis is influenced by factors associated with fungal species, underlying diseases, or the host status.[3] Diabetes mellitus (DM) is a group of metabolic diseases with high blood sugar levels over a prolonged period. DM is very common globally and known to suppress the cell mediated immunity and increases the frequency of infections.[4, 5] Infectious diseases in diabetic patients are always more severe than in non-diabetic ones, as observed in this study. However, there are some limitations to this study. Hepatitis patients also constitute a large portion of infections in the study. Because the Third affiliated hospital of Zhongshan university is famous for its liver diseases department, we have much more hepatitis patients than other hospitals of the same rank, which resulted in a bias in the statistics associated with underlying diseases.

In this study, all strains were considered susceptible to amphotericin B, although interpretative breakpoints for amphotericin B have not yet been established, due to a lack of correlation between in vitro and in vivo results.[6] Current data suggest that the CLSI M27-A methodology does not permit reliable detection of amphotericin B resistance.[7] According to the CLSI guidelines, most of the strains in our study were susceptible to voriconazole, fluconazole，fluorocytosine and dose-dependently susceptible to itraconazle.

4. Conclusion

In contrast to Candida albicans, there is only limited reported experience of resistance testing for Cryptococcus neoformans. Resistance in C.neoformans clinical isolates remains uncommon. But we observed that MICs increased in serial isolates, supporting the paradigm that resistance may evolve during antifungal therapy. However, we also observed that some fluconazole-resistant isolates with increased MIC values remained susceptible to another triazole agent, such as itraconazole.

We provide evidence for the understanding of the fungal pathogen and parameters potentially useful for the management of the diseases it causes.

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Effect of Dexmedetomidine Hydrochloride on Early Cognitive Function in Postoperative Elderly Patients

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Abstract: Purpose: to explore the effect of dexmedetomidine hydrochloride on early cognitive function in postoperative elderly patients. Methods: during December 2015 to November 2016, 80 elderly patients who received surgical treatment in our hospital were selected as research object. Result: patients were randomly divided into two groups (control group and research group). On the basis of routine anesthetic induction, patients in research group took dexmedetomidine, in comparison, patients in control group took an equal dose of sodium chloride solution. The goal was to evaluate the anesthetic effect of those two methods. One hour before surgery, there was no significant difference in the MMSE score between the two groups ($P > 0.05$). In research group, the MMSE scores at postoperative 1d and 3d were (23.8 ± 2.4) and (27.1 ± 2.0) respectively. In control group, the MMSE scores at postoperative 1d and 3d were (20.5 ± 3.2) and (24.6 ± 3.4) respectively. The difference was statistically significant ($P < 0.05$). There was no significant difference in anesthesia time, awake time and extubation time between those two groups ($P > 0.05$). Conclusion: using dexmedetomidine in elderly patients after surgery can protect early cognitive function and improve the prognosis.

Keywords: Dexmedetomidine; Early cognitive function; Anesthetization

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1. Introduction

Because the matter of physique and surgery to elderly patients, it's easy to damage their early cognitive function, which mainly manifests in several aspects such as impaired cognition and impaired social function. Dexmedetomidine is an adrenoceptor agonist, which could adjust metabolism. It has been gradually applied to the surgical anesthesia field. However, there were only a few researches about early cognitive function in elderly patients after surgery.[1] Therefore, in order to explore the effect of dexmedetomidine hydrochloride on early cognitive function, this thesis contains 80 elderly patients after surgery in our hospital, which is reported as follows.

2. Information and Methods

2.1 Patients' Information

80 elderly patients who received surgical treatment in our hospital from December 2015 to November 2016 were selected as research objects, including 46 males and 34 females. The patients' age ranged from 60 to 77 and the average was (68.6 ± 2.4). Inclusion criteria: 1) all patients are over 60 years old; 2) patients had undergone surgical treatment; 3) patients had already consented to this study and signed the informed consent form. Exclusion criteria: 1) patients with neurological disorders; 2) patients who used analgesic drugs before the surgery. These patients were randomly divided into two groups (control group and research group). The general data of the two groups

were comparable ($P > 0.05$).

2.2 Research Method

Both groups used routine anesthetic induction: 1.5 mg/kg propofol, 2 μg/kg fentanyl and 0.6mg/kg rocuronium bromide for intravenous injection. Patients in control group took 0.9% sodium chloride solution with the dose of 4μg/m for injection. Patients in research group took the equal doses of dexmedetomidine for injection.

The same anesthesia maintenance was adopted in the two groups. Took 8 - 10 μg • kg^{-1} • h^{-1} remifentanil and 1-1.5mg • kg^{-1} • h^{-1} simultaneously for intravenous injection, and then compared the anesthetic effects of these two groups.

2.3 Judgment Criteria

Mini-Mental State Examination (MMSE) was adopted to evaluate several indexes such as memory, language and attention respectively one hour before surgery, 1d after surgery and 3d after surgery. Total score: 30 points; 27 or more: normal; 24 - 27: mild cognitive impairment. 19 - 23: moderate cognitive impairment, 18 or below: severe cognitive impairment. Patients with restlessness and memory disorders will be directly diagnosed as cognitive impairment.[2]

2.4 Index Observation

Compare anesthesia time, awake time and extubation time between two groups.

2.5 Statistical Treatment

SPSS 17.0 software was adopted in this research to process data, wherein, ($\bar{x} \pm s$) means measurement data and t refers to the test. $P < 0.05$ indicates statistical difference.

3. Results

3.1 MMSE Scores Comparison in Two Groups

In this research, one hour before surgery, there was no significant difference in the MMSE score between the two groups ($P > 0.05$). In research group, the MMSE scores at postoperative 1d and 3d were (23.8 ± 2.4) and (27.1 ± 2.0) respectively. In control group, the MMSE scores at postoperative 1d and 3d were (20.5 ± 3.2) and (24.6 ± 3.4) respectively. The difference was statistically significant ($P < 0.05$). See Table 1 data.

Table 1. Comparison Table of MMSE Scores in Two Groups ($\bar{x} \pm s$)

	Pre-surgery 1h	Post-surgery 1d	Post-surgery 3d
Research group	28.5±2.2	23.8±2.4	27.1±2.0
Control group	28.4±2.6	20.5±3.2	24.6±3.4
t	2.210	7.694	9.821
P	0.982	0.014	0.009

3.2 Anesthetic Effect Comparison in Two Groups

In this research, there was no significant difference in anesthesia time, awake time and extubation time between those two groups ($P > 0.05$). See Table 2 data.

Table 2. Comparison Table of Anesthetic Effects in Two Groups ($\bar{x} \pm s$)

	Anesthesia time (min)	Awake time (min)	Extubation time (min)
Research group	118.6±5.2	32.6±4.4	44.6±2.8
Control group	120.1±4.3	33.2±3.9	44.0±3.0
t	1.289	2.102	2.004
P	0.513	0.614	0.387

4. Discussion

Because the difference of the physique of elderly patients, patients with poor physical quality were more likely to suffer cognitive impairment after surgical anesthesia. It's not conducive to protect patients' physical and mental health.[3] Routine anesthetic induction was the combination of propofol, fentanyl and rocuronium bromide. However, this induction could easily damage nervous system.[4] Dexmedetomidine is an adrenoceptor agonist, which could reach the effect of analgesia and sedation by inhibiting receptor.[5] Now it has been applied to clinical anesthesia of adjuvant therapy. However, there were only a few researches about early cognitive function in elderly patients after surgery. Therefore, it has important value to exploring its clinical effect.

In this research, one hour before surgery, there was no significant difference in the MMSE score between the two groups ($P > 0.05$). In research group, the difference of MMSE scores at postoperative 1d and 3d was statistically significant ($P < 0.05$). It showed using dexmedetomidine in elderly patients after surgery can improve MMSE scores and protect cognitive function at the greatest extent for keeping it away from cognitive impairment. In anesthetic induction, anesthetics could usually damage brain nerves and tissues. Dexmedetomidine is an adrenoceptor agonist. It has a short half-life. In clinical, it could reach the effect of analgesia and sedation by inhibiting the release of norepinephrine. Meantime, it has the effect of diuresis and cold resistance. It may be due to the drug's protective effect on the patient's brain, but clinical studies still need to be further verified. Clinical studies show that dexmedetomidine has a certain protective effect on thalamic and damaged cortex.[6] There are also other studies show that dexmedetomidine can reduce the damage to the patient's nervous system,[7] which conforms to the research perspectives of this thesis.

In this research, there was no significant difference in anesthesia time, awake time and extubation time between those two groups ($P > 0.05$). It is demonstrated that using dexmedetomidine to assist anesthesia in elderly patient's operation does not affect the anesthesia time and awake time, which may be due to the fact that dexmedetomidine has the anesthesia auxiliary efficacy, but it has no influence on the dosage and time of anesthesia. Researchers point out that dexmedetomidine is a receptor agonist that can be used for clinical anesthesia in patients and can achieve ancillary efficacy, but it has no influence on the time and dose of anesthesia,[8] which conforms to this research perspective.

5. Conclusion

In conclusion, the use of dexmedetomidine for elderly patients with operation can effectively reduce the influence of early postoperative cognitive function, and can improve the patient's prognosis, with higher clinical application and promotion value. However, due to the small sample size of this study and the obvious differences in the physique of elderly patients, this study may have some errors; but in general, it still has implications for the anesthesia treatment of elderly patients with operations.

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Research Progress of Different Acupuncture and Moxibustion Methods in the Treatment of GERD (Gastro Esophageal Reflux Disease)

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Abstract: Over the past decade, there have been many clinical reports on acupuncture and moxibustion in the treatment of gastro esophageal reflux disease, which has been an increasing trend year by year. The authors use "acupuncture", "acupuncture and moxibustion" or "electric acupuncture" and "GERD" or "gastro esophageal reflux disease" as key words for retrieval. Through the clinical articles on acupuncture and moxibustion methods in the treatment of GERD indexed by China CNKI academic literature database, VPCS database and Wanfang database from 2006 to 2016, we find that: acupuncture and moxibustion methods in the treatment of GERD has definite curative effect and outstanding advantages. It can better improve the symptoms of patients and can effectively improve their quality of life. At present, in clinical applications, there are treatment ideas such as the method of acupuncture on governor vessel back segment, the old ten needles, and compatibility of five meridians in the aspect of acupoint selection; there are treatment ideas such as fire acupuncture, thread-embedding, and electric acupuncture in the aspect of method of needling and moxibustion; there are treatment ideas such as acupuncture and moxibustion combined with pinellia ternate Xiexin Decoction, Chinese herb bath, deanxit (flupentixol and melitracen tablets) in the aspect of acupuncture and medicinal treatment. This paper comb integration of the current variety of therapies, in order to allow readers to obtain a more comprehensive clinical diagnosis and treatment ideas of gastro esophageal reflux disease.

Keywords: GERD (Gastro esophageal reflux disease); Acupuncture and moxibustion; Review.

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1. Introduction

GERD (Gastro Esophageal Reflux Disease) refers to a disorder in which the contents of the stomach or duodenum flow back into the esophagus, causing discomfort and (or) complications[1]. The typical symptoms are acid reflux and anti-feeding. Pain in the heart and back of the sternum may present with foreign body sensations in the pharynx, difficulty in swallowing, noisiness, belching, heartburn, upper abdominal pain, and fullness of both ribs. Some lack the typical performance of the digestive tract, but the main performance outside the digestive tract, known as "resting reflux", and accompanied by esophageal symptoms, such as sinusitis, bad breath, dry mouth, biting teeth, upset, Pharyngitis, cough, irritability, glous hystericus, asthma, constipation, etc. GRED is already a kind of high-grade chronic disease. Its complexity is getting higher and higher, the symptoms often alternate, and it seriously affects the quality of life of patients. It has been increasingly valued by clinicians. The pathogenesis of this disease in modern medicine has not yet been clearly studied. The treatment is mainly based on the suppression of acid, mucous membranes, and gastrointestinal motility. However, the symptoms are not significantly improved, the adverse drug reactions are obvious, and the high rate of disease recurrence is still difficult to overcome.[2] According to traditional Chinese medicine, GERD belongs to the category of "esophageal fistula" and "stomach" in Chinese medicine. The literature on traditional Chinese medicine and acupuncture for treating GERD has been reported more and more and has achieved good results. The authors now comb and summarize the treatment of gastro esophageal reflux disease using different acupuncture and moxibustion methods in recent years, and strive to summarize, explore and integrate the advantages of different acupuncture and moxibustion methods for the treatment of gastro esophageal reflux disease.

The authors use "acupuncture", "acupuncture and moxibustion" or "electric acupuncture" and "GERD" or "gastro esophageal reflux disease" as key words for retrieval. Through the clinical articles on acupuncture and moxibustion methods in the treatment of GERD indexed by China CNKI academic literature database, VPCS database and Wanfang database from 2006 to 2016, the summary is as follows.

2. Therapy Using Acupuncture Alone

Acupuncture and moxibustion have been widely used to treat gastro esophageal reflux disease, and their clinical effect is significant[3]. There are the Method of acupuncture on governor vessel back segment, acupuncture abdomen with the old ten needles or micro-abdominal needles,[4] Compatibility of Five Meridians Regulating Qi and other treatment ideas. Among them, the method of acupuncturing the back diverticulum back segment is based on the theory of classical acupuncture theory and modern nerve segment theory, which is simple and concise, according to the sympathetic origin of the stomach in the spinal cord T3 ~ T9, in this segment to find tender points, with pain as a The scope of application is wider, especially for those with obvious tenderness points. However, there are many patients in the clinic who have difficulty finding or finding tender points. This is a limitation of this program. Acupuncture on the old ten-needle abdomen or micro-abdomen abdomen acupuncture program is a classic prescription for teachers such as Mr. Leting Wang and Mr. Zhiyun Bo. Their direct action on the abdomen is more direct, and they have stronger gastrointestinal function. If combined with Du Duo back section, The two complement each other and further expand the scope of acupuncture treatment of gastro esophageal reflux disease. The combination of the Five Classics Regulatory Regulating Law mainly discusses that the disease is divided into two categories: the actual condition and the positive person who regulates the liver and regulates Qi to regulate the Qi and regulates the Qi. The deficiency of the invigorating spleen helps the patients to adjust their spleen to regulate the Qi. However, during the actual diagnosis and treatment of the disease, the organs are dirty and yang. The rise and fall of qi and blood, and the pathogenic factors are complex, and the rules of onset and transmission of the disease is not one end. Relatively speaking, application accuracy is not easy, and clinical practice is not easy to promote. Detailed literature is discussed as follows.

2.1 The Method of Acupuncture on Governor Vessel Back Segment

Lujiao Gao, et al.[5] proposed the treatment of gastroesophageal reflux disease mainly acupuncture T3-T9 segments under the dorsal spinous process treatment program, acupuncture group once every other day, 3 times a week, acupuncture Governor back T3-T9 Under the segmental spinous process (including acupoints and non-acupoints, a total of 8 weeks) and Western medicine group each time 20mg, 2 times daily omeprazole enteric-coated capsules for control (co-treatment for 8 weeks). The results showed that: After the acupuncture group, the scores of RDQ and GERD symptom scores after treatment were significantly lower than that of the simple western medicine group, and the acupuncture treatment group was superior to the western medicine group.

2.2 The old Ten Needles

Yin Xu, et al.[6] proposed the treatment program of the old ten needles, and the acupuncture mainly acupoints as "Shangwan, Zhongwan, Xiawan, Tianshu, Qihai, Neiguan, Zusanli". They observed the use of "old ten needles." The regimen was compared with monotherapy omeprazole treatment. The results showed that: In the observation group, heartburn, anti-eating and total symptom scores and GERD-Q scores were lower than the control group.

2.3 Governor Vessel-Guided Acupuncture

Juan Li, et al.[7] selected 60 patients with non-erosive reflux disease and observed the use of the Du Meridian acupuncture group and the Rabeprazole sodium enteric-coated capsule group. The results showed that the total effective rate of using Du Meridian acupuncture method was as high as 90%, which was obviously higher than that of the administration of Rabeprazole sodium enteric-coated capsule alone. It was more clearly demonstrated that the Du Meridian acupuncture method was not only effective To improve the clinical symptoms of gastro esophageal reflux patients such as anti-feeding, acid reflux, heartburn, and noncardiogenic chest pain, it is also effective in improving anxiety, depression, and quality of life in patients[8]. Better than Rabeprazole, this program is worth promoting.

2.4 Compatibility of Five Meridians Regulating Qi

Shimin Pan, et al[9] analyzed and discussed the application of the "Compatibility of Five Meridians Regulating Qi" proposed by the academic school of Huxiang acupuncture through the reference of ancient related literature. The results of the literature study showed that the disorder of visceral qi and qi is a pathogenesis of gastro esophageal reflux disease. "Compatibility of Five Meridians Regulating Qi" can not only relieve liver and qi, inhibit wood and regulate Qi to treat positive gastro esophageal reflux disease, but also use spleen and qi to treat earth-gastric

esophageal reflux disease with asthenia syndrome. The clinical treatment of esophageal reflux disease has provided new ideas, and further pointed out that the "five-combined gas adjustment method" can also be used for other gastrointestinal diseases due to gastrointestinal disorders.

3. Therapy that Combined with Multiple Acupuncture and Moxibustion Methods

Different acupuncture methods have different corresponding indications for the best indication or stage of illness due to their different clinical effects.[10] In response to different syndromes or stages of gastro esophageal reflux disease, doctors mainly proposed the use of fire acupuncture, heat-sensitive moxibustion method, massage, percutaneous nerve stimulation and other ideas. Fire acupuncture, moxibustion method, and heat-sensitive moxibustion all have a good effect of dredging meridians, especially for cold syndrome type gastro esophageal reflux disease. Fire acupuncture is easy to operate, but can easily cause patients' fears; moxibustion and heat-sensitive moxibustion are moderate, and are easy to be accepted, but the burning of moxa causes disgust, but it also limits application promotion to a certain extent. Hualan Wang et al. observed that massage therapy is better for the treatment of stomach-esophageal reflux with stomach-deficiency type. Transcutaneous electrical nerve stimulation can improve the patient's anxiety and depression and other accompanying symptoms. Detailed literature is discussed as follows.

3.1 Fire Acupuncture Combined with Acupuncture

Yonghong Li, et al.[11] compared the combination of fire acupuncture with acupuncture and omeprazole. The results showed that the total effective rate of combination of fire acupuncture with acupuncture was 92.6% , which is higher than that of omeprazole group.

3.2 Acupuncture Combined with Heat-Sensitive Moxibustion

Wang Ying[12] found that the total effective rate of acupuncture combined with heat-sensitive moxibustion treatment was as high as 94.0%, which was significantly higher than that of simple heat-sensitive moxibustion treatment (the total effective rate was 80.0%) and acupuncture treatment alone (the total effective rate was 82.0 %).

3.3 Two-Mode Triple Therapy Combined with Heavy Moxibustion Method

Wang Hualan, et al.[13] used the two-mode triple therapy combined with heavy moxibustion method to compare with the conventional massage manipulation group. The results showed that the total effective rate of two-mode triple therapy combined with heavy moxibustion method was 100.00%, and the total effective rate of conventional massage was 94.44%. There is a clear advantage of womode triple therapy combined with heavy moxibustion method compared to conventional massage.

3.4 Transcutaneous Electrical Nerve Stimulation

Lingling Wu, et al.[14] found that transcutaneous nerve stimulation of Zusanli and Neiguan acupoints was combined with conventional medicine treatment and nursing, in the RDQ (reflux diagnostic questionnaire), SAS (self-rating anxiety scale), SDS (Self-Rating Depression Scale), and SF-36 (Brief health status questionnaire), which is better than that of conventional medications and nursing alone. This program can reduce the clinical symptoms of patients with gastro esophageal reflux disease, and significantly improve the patient's quality of life.

4. Therapy that combined Acupuncture and Moxibustion Methods with TCM (Traditional Chinese Medicine)

The clinical application of traditional Chinese medicine for gastro esophageal reflux disease is also very extensive. Clinical application includes immature bitter orange Xianxiong Decoction,[15] pinellia ternata Xiexin Decoction, Chaihu Guizhi Jiangtang Decoction, and proprietary Chinese medicine Dalitong Granules. The combination of ideas, acupuncture and traditional Chinese medicine on the one hand acupuncture and meridian channels can promote the arrival of traditional Chinese medicine to the disease, on the other hand the role of traditional Chinese medicine can also supplement the acupuncture and gas supplies and other basic materials to strengthen the role of acupuncture to clear the meridians, acupuncture and traditional Chinese medicine Relationships, such as the relationship between blood and blood, "Qi is the core of the blood, and blood is the mother of Qi", especially for some of the more serious and more typical conditions, acupuncture and traditional Chinese medicine combined often have a multiplier effect. Detailed literature is discussed as follows.

4.1 Electric Acupuncture Combined with Immature Bitter Orange Xianxiong Decoction

Liu Qiquan, et al.[16] used electric acupuncture combined with immature bitter orange Xianxiong Decoction to treat hepatogastric phlegm-type gastro esophageal reflux disease[17] and compared to omeprazole combined with domperidone. The results showed that the recurrence rate of electric acupuncture combined with immature bitter orange Xianxiong Decoction was 20.00%, which was lower than the recurrence rate of omeprazole combined with domperidone (36.67%), and it could significantly improve

the anti-eating, acid reflux, heartburn, and poststernal pain in patients with gastro esophageal reflux disease. Even clinical symptoms such as two threats, dry mouth and dry stools, there was a statistically significant difference in symptom scores after treatment between the two groups.

4.2 Pinellia Ternata Xiexin Decoction Combined with Abdominal Acupuncture

Haiming He, et al.[18] observed pinellia ternata Xiexin Decoction (Formula: Chuanhuanglian, dried ginger, Zhigancao each 5g, Pinellia ternata 12g, Radix Astragali 10g, Codonopsis 15g, Syndrome addition and subtraction: stomach Deficiency Plus Ophiopogon japonicus, Lily, Shiqi , Adenophora each 19g; stomach dry heat plus dandelion, coke hawthorn, paeonol each 10g, and to dry ginger). Combined abdominal acupuncture (acupoint selection: Guanyuan, Zhongwan, and Tianshu, while Liangmen, Chengmang, and Xiafu as auxiliary acupuncture sites) were used to treat gastroesophageal reflux disease and omeprazole combined with domperidone treatment group. The results showed that: pinellia ternata Xiexin Decoction[19] combined with abdominal acupuncture group in the improvement of acid reflux, chest pain and heartburn, gastroscopy grade, etc. are better than omeprazole combined with domperidone group.

4.3 Chaihu Guizhi Ganjiang Decoction Combined with Acupoint Thread-Embedding Therapy

Qingyun Ning, et al[20] used Chaihu Guizhi Ganjiang Decoction Combined with acupoint thread-embedding therapy in the treatment of intermingling cold and heat gastro esophageal reflux disease, compared to Rabeprazole tablets and Mosapride tablet oral treatment. The results showed that the Chaihu Guizhi Ganjiang Decoction Combined with acupoint thread-embedding therapy group can significantly improve the typical clinical symptoms such as heartburn, acid and anti-food in gastro esophageal reflux disease patients, and greatly relieve their contraction dysfunction of the lower esophageal sphincter[21]. In addition, the therapeutic effect is better than that of Rabeprazole tablets and Mosapride tablet oral treatment group.

4.4 Electric Acupuncture Combined with Dalitong Granules

Chaoxian Zhang, et al.[22] used electric acupuncture (acupoint selection: Zusanli, Zhongwan, Neiguan, Taichong, Gongsun) combined with Dalitong granules for the treatment of gastro esophageal reflux disease, compared to electric acupuncture alone, simple Dalitong granule treatment, and Western Medicine treatment. (oral treatment: Mosapride, Omeprazole, Amitriptyline). The results showed that the electric acupuncture combined with Dalitong granules can significantly inhibit esophageal acid and bile reflux, reduce endoscopic score, relieve gastro esophageal reflux symptoms, inhibit gastric acid secretion, promote gastrointestinal motility and antidepressant function, improve the quality of life, and has a good safety and long-term efficacy.

5. Therapy that combined Acupuncture and Moxibustion Methods with WM (Western Medicine)

The Western Medicine Deanxit,[23] Mosapride, colloidal bismuth pectin, Esomeprazole, Rabeprazole, Omeprazole and other series of medicines are highly targeted for the treatment of this disease, and the disadvantage is that the relative side effects are relatively large. The lack of efficacy in improving gastrointestinal function, etc. is due to the combination of acupuncture and moxibustion, which can achieve rapid therapeutic effect while reducing the amount of Western Medicine used and taking time, thereby further reducing the side effects of Western Medicine and mutual use. This is a development direction of integrated traditional Chinese and western medicine. Detailed literature is discussed as follows.

5.1 Acupuncture Combined with Deanxit

Caihong Ma, et al.[24] proposed that Deanxit combined acupuncture treatment , compared to Esomeprazole + Mosapride + colloidal bismuth pectin treatment (as control group). The study found: Deanxit combined acupuncture treatment[25] group after the treatment the HAMA (Hamilton anxiety rating scale) index score (9.08 ± 2.84) was better than that before treatment (27.58 ± 4.52). The HAMD (Hamilton Depression Scale) index score after treatment (9.60 ± 2.85) was better than that before treatment (31.40 ± 4.51); the total effective rate (88.00%) was higher than the control group (60.00%).

5.2 Electric Acupuncture Combined with Rabeprazole

Wang Ying and Peng Wei, et al.[26] used electric acupuncture combined with Rabeprazole in the treatment of gastro esophageal reflux disease, compared to electric acupuncture, or Rabeprazole alone(as control groups). The results of the study showed that: The serum GAS (gastrin) average level of electric acupuncture combined with Rabeprazole group was significantly higher than that of both the electric acupuncture group and Rabeprazole group alone.

5.3 Finger-Pressure Therapy Combined with Esomeprazole and Mosapride

Sheng Xie, et al.[27] use finger-pressure therapy combined with Esomeprazole and Mosapride in the treatment of extraesophageal symptoms[28] of gastro esophageal reflux disease, compared with Esomeprazole and Mosapride

oral treatment alone (as control group). The results of the study showed that: From the perspective of treating the effectiveness of gastro esophageal reflux disease and the extent of esophageal mucosal recovery, the finger-pressure therapy combined with Esomeprazole and Mosapride group is higher than that of Esomeprazole and Mosapride oral treatment group.[29]

5.4 Regulating Stomach and Calm the Adverse-Rising Energy Acupuncture Method Combined with Omeprazole Enteric Capsules and Itopride Hydrochloride Tablets

Liming Liu[30] observed regulating stomach and calm the adverse-rising energy acupuncture method (acupuncture at Zhongwan, Zusanli, Neiguan, etc.) combined with oral treatment of conventional medicines such as Omeprazole enteric capsules and Itopride hydrochloride tablets for gastro esophageal reflux disease, compared to oral treatment of Western medicines such as Omeprazole enteric capsules and Itopride hydrochloride tablets alone (as control group). The results showed that regulating stomach and calm the adverse-rising energy acupuncture method combined with Omeprazole enteric capsules and Itopride hydrochloride tablets group was significantly better than the western medicine oral treatment group in both clinical comprehensive efficacy and improvement of signs.

5.5 Electric Acupuncture Combined with Moving Cupping Therapy with Oral Treatment of Esomeprazole enteric Tablets

Zhipeng Hou, et al.[31] observed the electric acupuncture combined with moving cupping therapy with oral treatment of Esomeprazole enteric tablets, compared to the oral treatment of Esomeprazole enteric tablets alone(as control group). The results showed that: electric acupuncture combined with moving cupping therapy with oral treatment of Esomeprazole enteric tablets, whose comprehensive efficacy and total effective rate in improving patient's antacid, anti-eating, heartburn, non-cardiogenic sternal causal burning is obviously better than the oral treatment of Esomeprazole enteric tablets alone.

5.6 Common Goldenrop Jiangni Decoction Combined with Acupuncture and Moxibustion with Oral Treatment of Omeprazole as Required

Xiujuan Li, et al.[32] observed common goldenrop Jiangni Decoction combined with acupuncture and moxibustion with oral treatment of Omeprazole as required, compared to oral treatment of Omeprazole alone (as control group). The results showed that: common goldenrop Jiangni Decoction combined with acupuncture and moxibustion with oral treatment of Omeprazole as required, which has obvious therapeutic effect on GERD maintenance treatment patients, reduced the number of taking omeprazole in on-demand treatment, and has a significant decrease in the recurrence rate.

5.7 Acupuncture and Moxibustion Medicine Bath Combined with Proton-Pump Inhibitor

Yali Li, et al.[33] used acupuncture and moxibustion medicine bath combined with proton-pump Inhibitor in the treatment of gastro esophageal reflux disease, compared to proton-pump Inhibitor therapy alone (as control group). The results showed that: significant improvements in PSQI (Pittsburgh Sleep Quality Index) and HADS (Hospital Anxiety and Depression Scale) scores after the treatment of acupuncture and moxibustion medicine bath combined with proton-pump Inhibitor, compared to those before treatment, and significantly better than proton pump inhibitor treatment groups, which can be more effective relieving anxiety and reflux acid reflux and other reflux symptoms in patients with gastro esophageal reflux disease effectively avoids dependence on psychotropic drugs and drug reflux problems.

6. Conclusion

From the literature search, the acupuncture, moxibustion, massage, and drugs all have reports of different syndromes or different stages of the treatment caused by different causes of gastro esophageal reflux disease, as described in "The Inner Canon of Huangdi · The Theory of Different Therapy" As stated in the article: "The sage is therefore heterozygous and healed, and each one has its own merits. Therefore, if the disease is different and the disease is cured, the condition of disease is also known, and the general condition of the disease is also known." Although the disease condition of gastro esophageal reflux disease is the same, it is caused by Different causes or diseases in different stages of development or differences in the patient's constitution, and there are different accompanying symptoms, clinical choice of what method of treatment should not be dull, but should be based on the specificity of the disease, the level of disease, physical specificity Specific methods of sexual and acupuncture moxibustion are selected and used flexibly[34]. How to make accurate choices based on the condition is our next research direction. In addition, the use of traditional Chinese medicine therapy, it should not ignore the role of some Western medicine, especially in some difficult conditions; the rational use of Western medicine is also a good idea.

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Effect Observation of Fluor Protector on Secondary Caries of Sjogren Syndrome Patients

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Abstract: Purpose: to observe the occurrence rate of secondary caries on sjogren syndrome patients by filling carious cavities with simply using resin materials and fluor protector added resin materials. Method: 20 cases of sjogren syndrome patients, who were filled the decayed teeth in the Stomatology Department of our hospital from September 2015 to September 2016, and 155 carious cavities were selected to be involved in the experiment, and secondary caries would be determined in 3 months, 6 months and 12 months after filling of carious cavities. Result: the occurrence rates of secondary caries in the experimental group after treatment in 3 months, 6 months, 12 months were 1.37%, 2.74%, 5.48% respectively; while the rates in the control group were 4.87%, 7.32%, 13.41% respectively. There was statistical significance between differences of the occurrence rates of secondary caries in two groups. Conclusion: the occurrence of intraoral secondary caries of sjogren syndrome patients can be effectively reduced by using fluor protector after filling decayed teeth.

Keywords: Fluor protector; Secondary caries; Sjogren syndrome

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1. Introduction

Caries is a common intraoral disease of sjogren syndrome patients, which is often caused by weakened teeth remineralization ability and changed micro-ecological environment resulted from reduction of saliva flow rate of sjogren syndrome patients and cariogenic bacteria grow in large amount. Secondary caries refers to the recurrence of caries caused by various causes after the treatment of primary caries, happened at the junction of the filling body and the tooth, which is the most common cause of filling replacement and failure in clinical so far.[1-3]

2. Information and Methods

2.1 Subjects and Groups

20 sjogren syndrome patients who would be filled the decayed teeth in the Stomatology Department in our hospital hospitalized from September 2015 to September 2016 were selected in the experiment in accordance with inclusion criteria: 1) all the patients with carious cavities had to be filled; 2) the patients had been informed and had agreed with it. Exclusion criteria: 1) pregnant women; 2) those was diagnosed as pulpitis or periapical periodontitis, and teeth filled in large areas. They were divided into experimental group and control group, with 10 cases in each group. In the experimental group, there were 48 decayed teeth and 73 carious cavities, one male case and 9 female cases, aged 33-74, with the average age of (53.48 ± 5.22). In the control group, there were 55 decayed teeth and 82 carious cavities, one male case and 9 female cases, aged 29 - 76, with the average age of (52.55±5.67).

2.2 Main Materials and Equipment

Filtek TMZ350 XT Flowable, Filtek TMZ350 XT Resin, Singal bond Universal adhesive agent, 5% Sodium Fluoride fluor protector (3M, America); gluma acid etchant

(Germany); LED blue ray curing light (Beyond, America)

2.3 Research Method

Oral health knowledge was publicized first, and followed by scaling and treatment. Control group: bad tissue was removed without preventive expansion, and cavity margin enamel was made beveled. After isolating from moisture and disinfecting the cavity, and pulp was indirectly covered with Dycal self-solidifying calcium hydroxide near the place; then color comparison, and placement of matrix band and wedge were performed. 3M Singal bond Universal self-etching adhesive agent was painted on the cavity wall and light-cured for 20 seconds. Then flowing resin Filtek TM Z350 Flowable was injected into the wall and at the foot of the wire with 0.5 - 1mm thick, and light-cured for 20 seconds; the cavity was filled with Filtek TMZ350 XT resin (<2mm/layer, 20s light-cured/layer) by layers, the shape was trimmed, followed by bite adjustment and polishing. Besides the above operation, the experimental group applied 5% Sodium Fluoride fluor protector to the whole dentition. No water or gargle was given within 30 minutes after the operation, and within 4 hours, only soft food could be eaten. No brushing or drinking in the evening. The fluor protector was applied to the whole dentition every 6 months. All the operation was performed by the same one doctor.

2.4 Therapeutic Evaluation and Observation Index

All patients were carried out secondary caries determination in 3 months, 6 months, and 12 months after treatment. The diagnostic criteria of secondary caries were: 1) discoloration of dental tissue at the edge of restorations; 2) gap appearing between restorations and teeth, which could be detected to the softening dental issue; 3) caries appearing on the other dental surface.[4] Adopted visual examination, probing and x-rays to examine the gaps of the filling body.

2.5 Statistical Methods

We used SPSS11.0 statistical software, and X2 test for comparison between groups. The difference was statistically significant at $p<0.05$.

3. Results

3 months after treatment, the occurrence rate of secondary caries in the experimental group was 1.37% (1 ÷ 73), which was lower than that in control group: 4.87% (4 ÷ 82); 6 months after treatment, the occurrence rate of secondary caries in the experimental group was 2.74% (2 ÷ 73), which was lower than that in control group: 7.32% (6 ÷ 82); 12 months after treatment, the occurrence rate of secondary caries in the experimental group was 5.48% (4 ÷ 73), which was lower than that in control group: 13.41% (11 ÷ 82); There was statistical significance between differences of the occurrence rates of secondary caries in two groups.

4. Discussion

Composite resin has excellent aesthetic effects, relatively low thermal conductivity, and can retain more dental tissue in the cavity preparation, thus being widely used in clinical practice. However, the composite resin will shrink during the solidification, and in oral environment, it will have edge dyeing, breakage, falling off, secondary caries, etc.[5-6] Stratified filling can reduce the shrinkage rate of the filling body, ensure sufficient polymerization and increase adhesion. Besides, fluid resin, as the backing material for the cavity bottom, has a good adaptability to the wetting of gap, which can permeate through the enamel surface where ordinary composite resin can hardly penetrate into. So it will increase the bonding force of the dental tissue and composite resin, reduce micro leakage, and lower down the appearance of secondary caries.

Patients with sjogren syndrome has impaired salivary gland and reduced secretion of saliva, so the original buffering and mechanical oral cleaning function have also been weakened, but since the restorations cannot change the activity level of caries activity, therefore, the possibility of secondary caries in these patients is higher.[7] In order to improve the teeth anti-caries ability, fluoride can be adopted. Fluor protector is efficient, safe and easy to be used, being the most effective and widely used fluoride anti-caries material in the world.[8] The common application methods are applying the protector on the tooth surface where the filling body is placed and applying it on the whole teeth. Sjogren syndrome patients who have been filled with restorations belong to high-risk group of decayed teeth, and using fluor protector only on the filled tooth surface is not enough, so they need entire-teeth method. Fluoride can inhibit the formation of acquired membrane, decrease the acid production capacity of bacteria and control the demineralization ability of enamel, and thereby reduce the possibility of secondary caries.[9]

Meanwhile, in order to avoid the occurrence of secondary caries, prevention awareness of dental doctor during the operation process is essentially important. It is necessary to eliminate the conditions for the appearance in every part of dental restoration. At the same time, the doctor should pay attention to the controlling of micro-fissures appearance, the teeth cleaning, the treatment of systemic-related diseases, and regular follow-up, and thereby reduce the happen of secondary caries.[10]

5. Conclusion

This experiment determined the occurrence rate of secondary caries on patients with sjogren syndrome by comparing the treatment with simply filling and fluor protector used after filling, and the result was that the rate of the control group was significantly higher than that of the experimental group. It shows that the occurrence of secondary caries of sjogren syndrome patients can be effectively reduced by using fluor protector after filling decayed teeth.

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Reflections on Perfecting Teaching Quality Monitoring System in Secondary Medical Vocational Colleges

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Abstract: Teaching quality is an important component which constitutes secondary and higher medical colleges, at the same time teaching quality monitoring system is the key content of teaching quality. In the current, teaching quality system of many Chinese schools is comparatively inadequate and the construction of quality assessment is comparatively backward and unsystematic. This research made further exploration into the above question with effective scheme found question, among which finding effective scheme is the main method to guarantee the improvement and soundness of teaching quality monitoring system.

Keywords: Secondary medical vocational college; Teaching quality; monitoring system; Improvement

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1. Introduction

With the expanding Chinese market economy and strong support of policy, China's school scale was correspondingly broadened, forming the conflict situation of relatively tight school scale and teaching resources. Thus, the related issues about teaching quality is increasingly apparent[1] and severely affecting China's secondary medical vocational colleges' survival and development. For this situation, how to effectively consolidate and improve teaching quality has become one of focuses of attention. This research aimed at making systematic introduction of perfecting teaching quality monitoring system in secondary medical vocational colleges.

2. Teaching Quality Monitoring Theory

In the strict sense, teaching quality monitoring means the process of making positive and planned inspection, arrangement, assessment, feedback, improvement and other strategies on various elements that disturbing teaching quality in any step of teaching process, so as to guarantee school teaching mission on the rails[2] and reach schools' expected teaching objectives. Perfecting and improving teaching quality monitoring system is the precondition of guaranteeing school teaching quality's basic lifeblood, as well as an effective strategy of teaching quality's supervision.

3. Related Issues Existing in the Teaching Quality System in Secondary and Higher Medical Vocational Colleges

3.1 Relatively Backward Teaching Quality Assessment System

Many China's secondary medical vocational colleges were preparing and improving teaching quality assessment system, while in the realization they did not reach multilevel and standardized assessment system in the true sense. Most of teaching quality assessment were made by school peers, student participated supervisory vote or questionnaire form, which is only the self-feedback inside the school, lacking assessment and participation of industry experts from society and hospitals. The assessment quality and standard was imperfect at a comprehensive level.

3.2 Relatively Narrow Coverage Area of Teaching Quality Monitoring System

The establishment of teaching quality monitoring system is mainly composed of the whole process monitoring of operation and management of talents training objectives, major development construction, curriculum setting, teaching resources, practical operation teaching, teaching assessment and many other levels.[3] However, most of China's secondary medical vocational college' monitoring system have obvious limitations, with the monitoring area only covering teaching quality and teaching order with relatively narrow whole monitoring coverage, thus covering up many intuitive contents which reflect teaching quality.

3.3 Absent Effective Monitoring on Practical Teaching

In most of China's medical colleges, the main approach of reflecting teaching quality is using sole students' theory acceptance level as a monitoring reference index, which comparatively lacks supervision and monitoring on experiments and operation teaching link. Some colleges also attended to one thing and lost another. While focusing on teachers' researching capacity and academic level, they neglected the importance of medical students' operation ability to teaching quality. This situation resulted in lacking of students' operation ability training and evaluation system in teaching quality monitoring.

3.4 Untimely Feedback on Questions Existing in Teaching

Even though vocational medical colleges implemented strict monitoring on teaching quality, problems could not be reported and be solved timely due to checking and collecting information behind time. Most of the questions were conveyed to teachers orally without paying high attention and forming standard flow. That made the questions could not be followed up and corrected accurately, neither could teaching method be improved. Thus questions were stranded and dodged, forming a vicious circle.

4. Main Measures of Perfecting Teaching Quality Monitoring System in Secondary Medical Vocational Colleges

4.1 Construction of "Three Level" Teaching Quality Management System

Secondary medical vocational colleges should form multi-level monitoring system, mainly including "three levels" teaching supervision model in which building teaching and research offices is as foundation platform, departments as main part, and colleges as supervisor. Thus, colleges, departments, teaching and research offices' supervision strength is enhanced, forming responsible organizations which undertake teaching quality together, as well as an organizational community in which different management departments could perform their duties with clear division of labour, good coordination and individual focuses. This not only enables the implementation of teaching quality monitoring in the management implementation process, but also forms a relatively complete monitoring mechanism to a certain extent, and promotes a comprehensive supervision system starting from multiple levels.

4.2 Establishment of Teaching Supervision System of College and Departments

"The teaching supervision is to ensure that colleges and universities take the initiative to adapt to the needs of teaching reform and development. At the same time, it is also a basic system for supervision and correction of teaching work. It constitutes an important part of the school quality monitoring.[4]" In this regard, the relevant colleges and universities should set up a scientific and reasonable teaching supervision team, mainly including the college and department monitoring teams, which is responsible for completing the efficient feedback analysis of the problem discovery, management, inspection and guidance of the college teaching quality. In addition, the team also needs to show the outstanding characteristics in the teaching quality management of the university. Therefore, senior teachers with high prestige, rich teaching experience or outstanding retired teachers should be selected as the guiding members of the group, it shall also include specialist in hospital and other related industries, so as to improve the leak filling in the teaching progress and form a development chain in which the industry and talent training are closely integrated.

4.3 Establishment and Perfection of the Multi-Level Teaching Supervision System[5]

We should change the relatively single situation of tra-

ditional teaching quality supervision, and increase the important contents of lectures among university leaders, industry experts and teaching administrators. On the one hand, universities should constantly improve and manage the teaching idea, explore the new teaching mode and the virtuous operation system of teaching needed in the new era, and improve the teaching quality while reforming the teaching mode. On the other hand, universities should take the responsibility of cultivating the versatile and socially necessary talents, understand the training requirements of hospitals and other industries, and revise their talent cultivating program in a timely manner in accordance with their own teaching systems. In addition, students should conduct quality quiz scoring in the online classroom to form a seamless monitoring of classroom teaching quality management. Furthermore, after the end of each semester, universities should organize the regular inspections of the completion of teaching tasks, so as to build a close combination of classroom teaching quality and regular real-time monitoring.

4.4 Improvement and Strict Implementation of the Teaching Quality Inspection

Relevant departments should form a teaching supervision system of daily inspection and regular inspection. Regular examination can be divided into three stages, namely, the specific examination at the beginning of the semester, during the semester and the end of the semester. The examination at the beginning of the semester is mainly for the students' school opening task and teaching preparation, examination during the semester is mainly the inspection in the teaching process, including the level screening of the "three level" structure, namely the Dean's Office, the Departments and the Colleges. Examination at the end of the semester is a comprehensive assessment of the teaching quality throughout the semester. It takes references to the development and implementation of teaching tasks and the final examination results. In addition, universities also need to make daily random inspections, mainly through inspections and routine inspections by the Dean's Office, thus forming comprehensive and systematic teaching quality supervision.

4.5 Improvement of the Reward System for Teaching Quality Promotion

The relevant departments of the university should formulate corresponding reward mechanism, so as to realize the competition system combining teaching competition and teaching quality. The university should give rewards and related welfare benefits to teachers with effective teaching quality,[6] ensure that teachers can give full play to their subjective initiative and totally devote their enthusiasm and responsibility to teaching, so as to combine the psychological needs of teachers' self-development with the improvement of teaching quality, and finally achieve the goal of teaching level promotion and teaching idea improvement.

5. Conclusion

Teaching quality is the key index to check the survival and development of the college and adaption to time needs. Medical colleges must combine their own development needs and the current conditions of the industry's demand for talent to form a distinctive teaching quality management system, as well as the teaching management system in which teachers, administrators and students can participate in. It should also complete the teaching supervision system, including classroom teaching, practical teaching, teaching resources, teaching objectives and many other aspects, in order to ensure the sustainable development of medical colleges and the stable progress that adapts to the needs of the times.

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