Research Progress of Traditional Chinese Medicine in Pediatric Diarrhea

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Abstract: Traditional Chinese medicine has a long history and definite efficacy in the treatment of pediatric diarrhea, there are also unique clinical experiences and treatments, this article reviews a large number of relevant literature to discuss the research progress of traditional Chinese medicine in the treatment of pediatric diarrhea for clinical reference, and is summarized.

1. Introduction

Pediatric diarrhea is a common clinical disease in children caused by a variety of factors, characterized by increased frequency of stools, thin stool, or watery stool. Equivalent to pediatric diarrhea disease in Western medicine, western medicine divides the causes of diarrhea in children into infectious and non-infectious categories [1]. Infectious diarrhea is mainly caused by viruses, bacteria, etc, noninfectious diarrhea is often caused by dietary factors and digestive disorders. The disease can occur all year round, higher incidence in summer and autumn, diarrhea symptoms that occur in different seasons will vary, it is more common in 2-year-old children, it is one of the most common diseases of infants and young children in my country, and it is easy to cause epidemics. Pediatric diarrhea is treated appropriately and has a good prognosis, while severe disease has a poor prognosis. In severe cases, excessive diarrhea is prone to symptoms of qi and yin injuries and even yin exhaustion, prolonged diarrhea is easy to develop into slow convulsion or chancroid syndrome.

2. Disease name evolution

Successive generations of medical texts have a more detailed discussion of diarrhea, and there are many names about diarrhea. The "Yellow Emperor's Internal Canon" first recorded some symptoms related to diarrhea, among which the description of diarrhea is also the most comprehensive, from the different clinical manifestations of diarrhea, diarrhea is called "Leakage", "Cave Leakage", "Wet Leakage", "Back Pool", "Note" and so on [2]. Before the Han and Tang Dynasties, diarrhea and diarrhea were usually mixed, diarrhea is generally referred to as "low profit" in "Treatise on Typhoid Diseases". It was not until the Sui Dynasty that the separation of diarrhea and dysentery was first
demonstrated in the "Treatise on the Origin of Diseases". "Pediatric Drug Evidence Direct Tips" first explicitly proposed the name of "diarrhea". After the Song Dynasty, the name of "diarrhea" was basically determined, and it has been used to this day [3].

3. Etiology and pathogenesis

Traditional Chinese medicine believes that the etiology of pediatric diarrhea is more common in feeling external evil, injury to diet, and weakness of the spleen and stomach, and the disease is mainly in the spleen and stomach. The key to the pathogenesis is that the spleen is trapped and wet, the lifting is lost, the water is wet, the valley is stagnation, and the turbidity is combined and falling, forming diarrhea. "Pediatric Health General Micro Theory - Theory of Vomiting and Diarrhea" pointed out: "Children who vomit diarrhea are caused by weak spleen and stomach, irregular breastfeeding, cold and humidity, and evil dry and righteous". It is recorded in the "Evidence and Treatment of Diarrhea in Young and Young Age": "The root of diarrhea is all due to the spleen and stomach, and the stomach is the sea of water valleys, and the spleen is mainly transported, so that the spleen and stomach are strong, and the water valley is corrupted and the blood is honored." If the diet is out of control, the cold temperature is not adjusted, so that the spleen and stomach are injured, the water will be wet, the valley will be stagnant, the essence qi cannot be infusion, and even the pollution will fall, and the diarrhea will be exhausted." It is pointed out that the root cause of diarrhea is dampness, spleen and stomach dysfunction or dysfunction. Modern physician Wang Jingan [4] believes that the main cause of diarrhea lies in the spleen, the main cause of vomiting lies in the stomach, and long-term diarrhea leads to no pay at the bottom of the kettle, and has a certain relationship with the kidneys, and the main cause of diarrhea lies in the liver, but it is relatively rare in clinical evidence. External diseases, internal injuries, self-illness and panic are often the causes of their illness, and the pathogenesis is caused by the sinking of temper and loss of good luck. Wang Xuefeng [5] believes that the main causes of diarrhea are spleen deficiency and dampness, spleen deficiency is wet, and wetness is diarrhea. Acute diarrhea is mainly wet, and chronic diarrhea is mainly spleen deficiency. The factors that lead to wetness and spleen deficiency mainly lie in three aspects, one is the evil of external wind, cold, heat and dampness, the other is injured by diet, and the third is the weakness of the spleen and stomach caused by insufficient innate endowments or acquired loss of nourishment.

3.1 Feel the evil

Children's internal organs are delicate, the skin is weak, if the adjustment is not appropriate, it is easy to be attacked by external evils. If the external feeling of wind, cold, heat, heat and wet evil combined to cause diarrhea, due to the different seasons, wind and cold diarrhea in all seasons, but diarrhea is more common in summer and autumn, long summer is humid, so the predecessors have "no humidity does not become diarrhea", "wet into five diarrhea" said. "Su wen" records the external causes of diarrhea: "Spring hurts the wind, evil qi remains, it is a hole leakage", "Long summer good disease cave leaks cold", "Spring hurts the wind, summer gives birth to diarrhea". In the Song Dynasty, the "General Micro Theory of Pediatric Health" has a record of children's summer diarrhea: "When diarrhea is hot in the summer, there are many patients, and it is said that the heat and diet are cold." If it is not hurt by heat, it will be hurt by cold", the summer day diarrhea is divided into cold and hot two, if it is injured by the heat and diarrhea, in order to feel the heat caused by diarrhea, if the external disease is caused by cold and evil qi, or for diet cold injury and spleen and yang caused by diarrhea, belongs to cold diarrhea [6]. "Introduction to Medicine" mentions that rheumatism is the four seasons of rheumatism, also known as leakage. Children with rheumatism are more likely to have abdominal pain, abdominal pain and desire for stool, yellow or bluish green loose stools, abdominal pain relief after stool, often sandwiched with external evidence [7].
3.2 Hurt diet

Children often have insufficient spleen, do not know how to eat and drink, if the regulation is inappropriate, breastfeeding, improper diet, excessive cold food and difficult to digest food, can damage the spleen and stomach, and cause diarrhea. The view of "New Book for Young Children" on children's diarrhea: "This time is mostly due to excessive food that hurts the spleen and stomach." He also said: "This disease is cold in the spleen." "Cold food can come from direct feeding of raw and cold stuff or indirectly from breast milk. Qian Yi believes that children's "five internal organs, complete but not complete, complete but not strong", children's internal organs are delicate, the digestive function of the gastrointestinal tract is not yet perfect, coupled with the inability to self-regulate diet, it is easy to lead to the rise and fall of the spleen and stomach qi machine disorders, thus complicated by the symptoms of vomiting and diarrhea, that is, the so-called "vomiting diarrhea milk does not eat, wounded food also" [8].

3.3 Weak spleen and stomach

Pediatric body spleen deficiency, spleen deficiency is derelict in transport, weak stomach is rotten and incompetent, cannot metamorphosis subtle, so the water is wet, the valley is stagnant, and go down, become spleen deficiency and diarrhea. There is also empirical evidence of diarrhea, due to mistreatment and mistreatment, long-term illness leads to weakness of the spleen and stomach, and turns into spleen deficiency and diarrhea. When discussing the pathogenesis of diarrhea in children, "Treatise on the Origin of Diseases" repeatedly mentions that "gastrointestinal deficiency" causes diarrhea caused by feeling different evil qi. Zhang Jiebin clearly proposed that the root cause of diarrhea lies in the spleen and stomach: "The root of diarrhea is all due to the spleen and stomach. The "Children's Guide" lists "spleen deficiency diarrhea" as a disease name for pediatric diarrhea, and mentions that spleen deficiency diarrhea is mostly formed due to spleen unhealthy luck.

3.4 Spleen and kidney yang deficiency

The course of diarrhea caused by spleen deficiency prolongs for a long time, first depleting the spleen, then damaging the spleen and yang, and over time, the spleen and kidney injury lead to spleen and kidney yang deficiency. If the yang qi in the kidney is insufficient, the temper is lost in warmth, the yin and cold qi is unique, and the water valley does not melt and goes between the intestines, it will form a clear and cold, leaking spleen and kidney yang deficiency. The temper takes the sun as luck, the kidney sends the real fire of the door of life, if the child's congenital endowment is insufficient, or the long-term illness and diarrhea can damage the yang of the spleen and kidneys, the fire of life is weakened, the fire is not warm, the evil of cold is flourishing, and the water valley cannot be transported, and it walks in the large intestine. "Children's Experience" mentions that the kidney opens the trick in the two yin, and is the master of closed hiding, if the kidney is deficient, it cannot be closed and hidden, and the water valley is from below. As the so-called kidney is the stomach pass, the opening is in the two yin, and the main division is the two stools, if the yang qi in the kidney is insufficient, the hole will not stop leaking.

3.5 Water wet spleen

"Su Wen" says that "if you win wet, you will be damp. "Zhang Jiebin has a clear understanding of the mechanism of diarrhea. If the spleen injury cannot transport water and digest food, the normal water liquefaction becomes wet and stagnant, food accumulates, and finally merges and falls into diarrhea. The "Guide to Childhood" explains the general pathogenesis of pediatric diarrhea. When it
comes to children's diarrhea, it is mostly formed because the spleen is attacked by wet evil and the soil is not overwhelmed by water. Due to the different causes of diarrhea, different types of diarrhea are formed, and the "water diarrhea" is listed separately, the formation of watery diarrhea in children's spleen and stomach is wet, and it can be seen that watery spleen is the basic pathogenesis of diarrhea in children.

4. Dialectical typing

Regarding the classification of diarrhea in children, The Guidelines for the Diagnosis and Treatment of Common Pediatric Diseases in Traditional Chinese Medicine divide diarrhea into common symptoms and variations, among them, it is often divided into wind and cold diarrhea, humid heat diarrhea, spleen deficiency diarrhea, wound and food diarrhea, spleen and kidney yang deficiency diarrhea; the variable syndrome is divided into two wounds of qi and yin and the syndrome of yin exhaustion and yang removal [9]. "Difficult Ching, Fifty-seven Difficulties" divides diarrhea into five types: spleen leakage, gastric leakage, small intestine leakage, large intestine leakage, and large fatigue. The "New Book for Young Children" divides the symptoms of diarrhea into nine types: cold diarrhea, accumulated diarrhea, wound diarrhea, water valley diarrhea, shock diarrhea, cave diarrhea, violent diarrhea, and long-term profit. "Children's Iron Mirror" divides diarrhea into five types: spleen deficiency diarrhea, spleen fever diarrhea, wounded food and stagnant diarrhea, qi deficiency diarrhea, and liver diarrhea, he also proposed a method of distinguishing cold, heat, virtual and real by distinguishing the color of the fall.

The experience of modern physicians is slightly different: Wang Jingan [4] believes that there are too many types of diarrheal diseases in ancient times, according to the ancients, diarrhea has long been believed to be a special disease of spleen deficiency, and the saying that chronic diarrhea will hurt the kidneys, combined with clinical practice, the two keys of "spleen deficiency" and "kidney deficiency" are closely attached to the syndrome differentiation, diarrhea is divided into two types: spleen deficiency diarrhea and kidney deficiency. Chen Zhaoding [10-11] believes that diarrhea is divided into traumatic diarrhea, wind and cold diarrhea, humid and hot diarrhea, cold and wet diarrhea, spleen deficiency diarrhea, spleen and kidney yang deficiency diarrhea, and shock diarrhea.

5. Differentiation and Treatment

5.1 Strengthen the spleen and nourish qi

The treatment method of strengthening the spleen and invigorating qi is suitable for diarrhea with weak spleen and stomach. Spleen and stomach weakness diarrhea can be seen loose and thin, light and heavy, often repeated, and can be diarrhea several times a day to dozens of times. The stool is light yellow in color, dairy food is difficult to digest, abdominal distension and bowel ringing, accompanied by fatigue and weariness, yellowish complexion, thin muscles, light tongue, thin white tongue, weak pulses, and dull fingerprints. Clinically, it can be treated by adding and subtracting Shenling Baizhu Powder. "Taiping Huimin and Pharmacy Bureau Fang" uses the four gentlemen Tang Jian Spleen and Qi to treat weak temper, and Qian Yi added Chen Pi on this basis to disperse and strengthen Qi and Spleen, make up but not lag, also created Qian's Baiju Powder, invigorate the spleen and nourish qi and exercise qi to generate body and quench thirst, widely used for future generations. The "Children's Guide" believes that the treatment of spleen deficiency and diarrhea with ginseng white surgery will be effective.

5.2 Regulate qi and warm yang

The method of regulating qi and warming yang is suitable for feeling wind and cold, abdominal pain caused by spleen and stomach deficiency or eating raw cold melons or cold in the umbilical
abdomen, that is, diarrhea, the main clinical symptoms are loss of appetite, warmth and cold, warm limbs, long urine, accompanied by a pale complexion, white and moist tongue, slow pulse, faint fingerprints, these symptoms are when regulating qi and warming yang during the treatment of middle burner Deficiency and Cold, fang chose aconitum lizhong decoction to add flavor. "Preparation for emergencies" treats children's summer moon accumulation cold diarrhea like water, use Wenzhong Decoction to warm and nourish Zhongyang to adjust its stomach qi and prevent diarrhea. Wan Quan said: "The great method of curing diarrhea, do not ask about cold and heat, take Lizhong pills first." It can be seen that the temperature and yang of rationality play an important role in the treatment of pediatric diarrhea.

5.3 Clearing damp and promoting diuresis

The method of dihydration and moisturization is suitable for splenic diarrhea, in summer and autumn, children eat melons and fruits raw and cold, which hurts the spleen and stomach, in addition, the feeling of external dampness or wet evil endogenous, water moisture remains in the scorch and pouring down, loose stools, bowel sounds and less urine, not thirsty or thirsty without drinking water, red tongue and white moss, treatment is appropriate to remove dampness and water, fang uses Wuling powder to add and subtract. The "Yellow Emperor's Internal Canon" mentions that it is not good to urinate, and the profit is divided first, it is also mentioned that the treatment of wet syndrome does not require urination, which is not an effective treatment. "Confucian Affair" adopts the method of dividing yin and yang and benefiting waterways to clear heat and humidity, use manna drink, Wulingsan, and Tianshuishan to treat children's flood diarrhea. In general, the application of water dilemma should pay attention to the combination of the condition, if there is heat, cooperate with the method of clearing heat, if it lasts for a long time, it will be accompanied by the treatment of ascending and lifting, so as not to repress the yang qi.

5.4 Accretion delay

The method of eliminating accumulation and guiding stagnation is suitable for diarrhea caused by milk food, it is more common clinically. Children have diarrhea due to food accumulation, the abdominal distension is full of pain, do not think about eating, the pain is reduced after diarrhea, and the stool is sour and smelly such as egg failure, belching and rancidity, bad breath and other symptoms. During treatment, stagnation should be removed first and then the spleen and stomach should be conditioned, Fang chooses Baohe Pills plus or minus. "The Book of Living Young Hearts" treats accumulated diarrhea first to remove the accumulation, and then to stop the diarrhea, after the diarrhea is stopped, the spleen can be consolidated, and the disease can be eliminated, and the wounds contained in the book, because of the cold and cold of the diet, first warm the stomach, and then consolidate the spleen. The "Baby Protection Summary" judges whether the stagnation dissipates through abdominal pain, and then uses different prescriptions. Abdominal pain indicates that the accumulation has not disappeared, use Baohe Pills; if the abdominal press is not painful, it indicates that the stagnation has been removed, and the spleen and stomach are adjusted with different functions.

5.5 Warm the kidney and strengthen the spleen

The method of warming the kidneys and strengthening the spleen is suitable for diarrhea at dawn, how long does the child have diarrhea, the disease is caused by the spleen and kidneys, so that the kidney yang is weakened, and diarrhea occurs before dawn, pain around the navel, diarrhea begins when the diet enters the stomach, clear and cold, or accompanied by prolapse, pale complexion, cold limbs, weak spirits, eye-catching when sleeping, pale tongue, white tongue, weak pulse, light fingerprint. During treatment, the method of warming the kidney and strengthening yang, strengthening the spleen and preventing diarrhea should be used, fang used to choose aconite Li
Zhong soup to add or subtract. Ke Yunbo [12] once mentioned that from the rooster to the dawn, it belongs to the yin yang, because the yang qi arrived at this time but did not arrive, so that the void and evil could not be left, so the diarrhea occurred at dawn. There are four reasons for this: first, spleen deficiency cannot restrict the evil of water and moisture; second, kidney deficiency cannot walk water; the third is that the fire at the gate of life declines and cannot produce soil; fourth, the qi of Shaoyang cannot be used.

6. Traditional Chinese Medicine Treatment Methods and Research

6.1 Traditional Chinese Medicine internal treatment

The method of TCM internal treatment for pediatric diarrhea is mainly dialectical treatment through the clinical symptoms of children with diarrhea, for the symptoms, most doctors either follow ancient recipes or add and subtract according to the clinical experience of each doctor on the basis of self-made prescriptions, Thereby improving the curative effect and shortening the treatment process. Guo Zilun [13] has a lot of experience in the treatment of Yang deficiency and diarrhea in children with the flavor of Bohe Pill, in clinical application, on the basis of Baohe Pills, add and subtract drugs, the treatment of pediatric yang deficiency and diarrhea with the treatment of food retardation, warm kidney and spleen, solid intestine and antidiarrheal has repeatedly achieved miraculous results. The prescription is as follows: Poria cocos 4g, Tangerine Peel 4g, Forsythia 4g, Faban Xia 3g, Baikom Kernel 3g, Cinnamon 3g, Jiao Hawthorn 6g, Jiao Shenqu 6g, Jiao Wheat Malt 6g, Jiao Lai Pine Seed 4g, Nutmeg (simmered to remove the juice) 3g. Wen Zhongyu [14-15] used self-prepared antidiarrheal prescription to treat pediatric diarrhea, starting from the two aspects of strengthening the spleen, transporting the spleen and reducing moisture, the main prescriptions are: Porridge 10g, Baishu 10g, Pork Ling 10g, Ze Epsom 8g, Fried Coix Seed 15g, Patchouli 8g, Sand Kernel 3g, Pomegranate 15g, Fried Malt 10g, Fried Grain Sprouts 10g, Licorice 3g, satisfactory curative effect has been achieved clinically.

6.2 External treatment of traditional Chinese medicine

Acupuncture and tuina therapy has the effect of regulating gastrointestinal function, improving the body's immunity, and supporting the right and dispelling evil spirits, it has obvious therapeutic effect on children's diarrhea. In the clinic, due to the difficulty of children's movement and fear of needles, it is difficult to implement acupuncture and moxibustion, and it is difficult to collect a large number of clinical cases, which has caused certain difficulties in the research of acupuncture for the treatment of pediatric diarrhea, but some studies still confirm that the use of acupuncture treatment methods to treat pediatric diarrhea has a significant therapeutic effect. Huang Xinshe [16] selected four acupuncture points of Lianghe Gu Acupoint and Liangtai Chong Acupoint as the main acupoint for the treatment of pediatric diarrhea in 20 cases, 17 cases were cured after one treatment, one case was cured after two to three treatments, the remaining 2 cases presented with dehydration symptoms, poor mental state and physical strength, after that, it is cured with treatment methods such as infusion and correction of electrolyte imbalances. Du Lifang [17] used traditional Tuina treatment methods to treat 52 cases of infantile diarrhea by Tuina treatment methods such as pushing the three passes, replenishing the spleen meridian, replenishing the large intestine, pushing the plate door, rubbing the umbilicus, rubbing the abdomen, and pinching the spine, the total effective rate is 98.08%, the results showed that TCM Tuina therapy shortened the number of days of recovery and improved the overall effective rate of treatment. It can be seen that acupuncture and tuina therapy on pediatric diarrhea treatment is worthy of recognition, and the operation is simple and easy, easy to be accepted by children and parents, so it should be widely used in modern clinical treatment.
6.3 Other therapies

6.3.1 Diet therapy

Zhang Jiayong [18] adopts dietary therapy for the treatment of weight loss caused by diarrhea in children, the treatment is porridge with porridge, washed with 10 grams of porridge, 30 grams of chicken liver and 50 to 100 grams of rice, consumption once a day can treat children's chancre, indigestion and other symptoms, and can play a role in strengthening the spleen and blood, nourishing the liver and kidneys and strengthening the physique. Wang Ruiqin [19] used yam jujube powder to treat spleen and stomach deficiency and cold spleen, and spleen and yang deficiency in children's diarrhea, by taking yam jujube powder for a certain course of treatment, the treatment effect is remarkable.

6.3.2 Rectal administration therapy

Li Hongmei [20] Medicinal Coptis 6g, Scutellaria baicalensis 9g, Huangbai 6g, Codonopsis 6g, Baishu 6g, Kudzu root 5g, honeysuckle 15g, Umei 6g, Licorice 3g. After decoction with water once a day, rectal administration is given twice a day for treatment. 10mL under 1 year old, 15mL at 1~3 years old, if discharged within 5min, can be repeated rectal administration once, the clinical treatment effect is better.

6.3.3 Traditional Chinese Medicine Retention Enema Therapy

Zhang Haiying [21] et al. used Kudzu Qianlian soup flavored retention enema to treat 43 cases of autumn diarrhea in infants and young children, with a total effective rate of 90.7%. In short, enema therapy has the advantages of fast drug absorption, long action time, and avoidance of gastrointestinal irritation, it not only conforms to the theory of "lung and large intestine on the surface" of traditional Chinese medicine, but also avoids the characteristics of children's difficulty in taking medicine, it has high clinical application value in pediatric treatment.

7. Summary

Traditional Chinese medicine has the characteristics of unique methods, precise efficacy, safety and convenience, in clinical applications, different treatments can be selected for children with different symptoms, for example, oral application of traditional Chinese medicine, external application of traditional Chinese medicine, acupuncture and pediatric chiropractic massage, traditional Chinese medicine retention enema, etc. have been widely used, in particular, the external treatment of Chinese medicine for pediatric diarrhea is not only simple to operate, the effect is fast and there are no adverse reactions. It can save the child from the pain of injections and drugs, and it is more acceptable to the child and his parents. Successive generations of doctors have conducted in-depth research on the etiology, pathogenesis, differentiation and clinical treatment of pediatric diarrhea, it has also achieved certain results in clinical and experimental research on the treatment of pediatric diarrhea, however, TCM still has certain limitations in the treatment of pediatric diarrhea, and it is necessary to continuously summarize new treatments and prescriptions to enrich and improve the pathogenesis theory of pediatric diarrhea to better guide clinical practice and improve clinical treatment effects.

References