

Research on Treating Constipation in Children

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Abstract: Qi, blood and body fluid are used throughout the whole treatment process of constipation in children. The treatment of constipation in children from qi-blood and body fluid is clear and effective. Syndrome differentiation of qi- blood-body fluid is one of the important methods of TCM, which runs through the whole process of constipation treatment. Treating constipation in children from qi- blood-body fluid is clear and effective.

1. Introduction

As a common digestive system disease in pediatric outpatient department, constipation in children has a high incidence for a long time, accounting for 0.3-28% [1]. The long-term treatment outcome of this disease is unstable and prone to relapse. Long-standing constipation not only increases the incidence of abdominal distension, abdominal pain and perianal diseases in children [2], but also affects the absorption of nutrition in children, and affects the growth of children's height and weight [3], disturbing children and their families deeply. Pediatric constipation is different from constipation in adults. Children's viscera are delicate, their body is not filled enough, and they have not developed good defecation habits. Pediatric disease is easy to be deficient or solid, or mixed with deficiency and solid, and attacking is easy to hurt healthy qi [4]. Ancient people called constipation "unsmooth rear" or "defecate hard", this term was first seen in the Huangdi Neijing. With the efforts of successive generations of doctors, traditional Chinese medicine continues to develop the characteristics of "simple, efficient and cheap", and has accumulated rich experience in the treatment of constipation in children for thousands of years, and its safety and effectiveness has been recognized [5]. Traditional Chinese medicine considers that disease location of constipation in children is in the large intestine, and the dereliction of large intestine conduction is its basic pathogenesis.

2. The relationship between qi, blood and body fluid

It is said in Leijing Zangxianglei that "essence, qi, Jin, fluid, blood and vein are nothing but the transformation of qi". Qi, blood and body fluid are the most basic substances to maintain life. They are all transformed by the water and grain refined by the transportation of spleen and stomach, and

their physiological effects are interdependent, mutual promotion and mutual transformation. Qi can transform, run, and immobilize blood; Blood can help nourishing and carrying qi. Similarly, qi can produce, run, and immobilize body fluid, body fluid can be transformed into qi and carry qi. While body fluid and blood are homologous, the two are rooted and transformed from each other. If the metabolism of qi, blood and body fluid is abnormal, the human body can appear qi deficiency, qi stagnation, qi stagnation of fire, fluid and blood deficiency, dry heat endogenous syndrome. According to Traditional Chinese Medicine, qi has the function of promoting the circulation of blood and the normal metabolism of water and liquid in the human body. At the same time, it warms the blood and liquid and makes them "go when they get warm". The various physiological metabolism of the human body, including defecation, is essentially the change of the rise and fall of qi. Body fluid can moisturize the whole body, nourishing the blood, regulating Yin and Yang, and excreting waste in the body. If body fluid is insufficient, it will affect its nourishing function, the stool will dry up, and further lack of body fluid will lead to imbalance of Yin and Yang in the body, and then the dysfunction of viscera. The dysfunction of the five zang-organs and six fu-organs leads to intestinal conduction dysfunction and innormal defecation [6]. It has been reported that qi-blood-body fluid syndrome differentiation is used to treat adult constipation [7], and it can also be used in children with constipation.

3. Treating from Qi

Qi is everywhere in the body, and it is the basic material of human life activities. The movement of qi can represent all physiological functions of the body. Qi can move through the whole body, promoting and regulating the metabolism of the human body, and also promoting the discharge of feces. Among the five zang-organs, constipation is the most affected by splenic insufficiency. Constipation is also called "splenoasthenic constipation", which means that the spleen is weak and cannot disperse body fluid, and the water is mostly eliminated from the urine and the stool is dry. The function of spleen and stomach in children is immature, and the qi of spleen is deficient. In addition, the diet is not controlled by themselves, the more food is often stagnant and stays in the middle-jiao. So the circulation of spleen qi and stomach qi is not smooth, and the function of transporting and transforming water and grain is blocked, which can cause constipation. If the diet stagnation time is too long, it is easy to produce heat, which burns body fluid, and the reduction of body fluid further aggravates constipation. Zhu Chunliang, a master of Chinese medicine specialist, believed that the weakness of the spleen and stomach was the main cause of constipation in children. The use of drugs that were dissipating mass and cathartic would make the qi of the spleen and stomach more deficient, the hub of qi movement was weak, the body's qi movement was in disorder, and the power of movement was lost, which would aggravate the constipation. Therefore, Zhu often used the method of "treating obstruction with suppository", namely the tonic method, and selected the Four gentleman decoction [8]. Based on the basic characteristics of pediatric constipation, Professor Yuan Bin proposed a treatment method based on the main principles of strengthening the spleen and helping movement, promoting digestion and regulating stomach [9], and the curative effect is remarkable. Common medicines: Prince Ginseng, tuckahoe, baked licorice, raw *Atractylodes macrocephala*, *pericarpium citri reticulatae*, Stir fried chicken inner gold, *Forsythia suspensa*, etc. Sijunzi decoction invigorating qi and invigorating spleen is composed of ginseng, tuckahoe, fried licorice and raw *Atractylodes atractylodes*. Here we change ginseng to Prince Ginseng, because ginseng is warm and dry, which is not suitable for children's constitution, while Prince Ginseng is mild and moist, which is more suitable for children. Raw *Atractylodes atractylodes* has fewer warm and dryness than fried *Atractylodes atractylodes*, whose power of promoting digestion is stronger and specializing in defecation. *Pericarpium citri reticulatae*

invigorates spleen, Stir fried chicken inner gold promotes digestion and invigorates spleen, they play the effect of invigorating spleen qi, digestion and transportation. Children with spleen deficiency are easy to accumulate food heat, so we use Forsythia suspensa to clear away the heat and disperse the knot. In this way, the hub of spleen and stomach can be turned over, the whole body is normally transported, the stool can be promoted, and the defecation is unobstructed.

"The lung is the foundation of Qi", because children have physiological characteristics of "spleen is often insufficient" and "lung is often inadequate", so it is easy to feel the six exogenous pathogens. Children have the saying of "pure Yang body", and it is easy to change from Yang and heat after feeling evil. There is a meridian connection between the lung and the large intestine, and the two constitute a superficial and internal relationship. The descending of the lung qi can promote the discharge of the stool, and the Yang and heat of the lung can also move down to the large intestine, thus burning the body fluid and drying the stool. Wang Junhai et al used Xiebai powder to treat constipation in children from the lung, and also achieved satisfactory results [10]. Commonly used drugs include white mulberry bark, Chinese wolfberry root-bark, baikal skullcap root, rhizome of wind-weed, dwarf lilyturf root, snakegourd seed, etc. Mulberry white skin and Chinese wolfberry root-bark both taste sweet, characters are cold and descending. They can enter the lung meridian, the combination of them can clear and reduce the heat of the lung and reduce the latent fire in the lung. Matching baikal skullcap root and rhizome of wind-weed to clear the heat of the middle and upper two jiao and enhance the intensity of clearing heat. Dwarf lilyturf root nourishes Yin to produce body fluid, so that body fluid is restored. Snakegourd seed not only clears the lung heat, but also embellish the intestine and purges. With the lung heat clearance, lung qi drop, then large intestine qi drop, the stool can be eliminated.

Children's mind is simple, and now parents are more "spoiled" for children, causing children to cry easily and make trouble when they are not in time, and their depression and impatience may lead to stagnation of liver qi, and the liver likes to maintain a state of regulation, do not like to be troubled by depression. Stagnation of liver qi leads to the whole body qi machine is not smooth, large intestine conduction function is weakened, children are prone to constipation. The disorder of liver qi can lead to the dysfunction of temper, so the treatment of children's constipation can be "soothing the liver, regulating qi" and "strengthening the spleen and promoting transportation". Professors Zhou Yongmao and Liu Jianzhong used the method of soothing the liver to treat children's constipation and achieved good results [11-12]. Commonly used Chinese herbs include Root of Chinese Thorowax, Rhizoma Cyperi, fleshfingered citron fruit, dried green orange peel, immature bitter orange, fried radish seed, fruit of hawthorn, medicated leaven, etc. This kind of medicine mainly taste spicy, bitter, warm, mainly go into the liver and spleen two meridians, can treat both liver and spleen, supplemented by fried radish seed, fruit of hawthorn, medicated leaven to refresh spleen and digest food. By this way, the children's mood is happy, the liver temper machine is adjusted, and the stool excretion is normal.

The kidneys control the excretion of urine and feces and manage the body fluid. Children ' kidney is often weakly. Kidney-qi deficiency mainly includes "kidney-yang deficiency" and "kidney-yin deficiency". Kidney-yin is the root of Yin fluid in the human body, and its deficiency leads to deficiency of intestinal body fluid. Its treatment can be attributed to the treatment of body fluid. And kidney Yang has the effect of warming stool, children are easy to crave and eat cold food, which damages the spleen Yang. Spleen Yang deficiency can lead to kidney Yang deficiency, Yang deficiency cause inner evil of yin-cold. Accompanied by yin-cold evil stagnation, the large intestine pathogen conduction is not smooth which can cause constipation. As recorded in Jingyue Quanshu, Jichuan decoction has the effects of warming the kidney, nourishing the essence, moistening the intestine and purging the stool. It is a classic prescription for the treatment of constipation caused by kidney Yang deficiency. Commonly used Chinese medicine are saline cistanche, dried ginger,

chinese angelica root, bitter orange, oriental waterplantain rhizome, skunk bugbane, etc. Cistanche tastes sweet salty and warm, can warm and tonify kidney Yang, embellish intestine and defecate; Dried ginger taste spicy heat, can warm spleen and stomach for dispelling cold, warming Yin evil away. Chinese angelica root is moisturizing blood dryness, moisturizing bowel for catharsis; Bitter orange conditions the movement of qi and help to relax stagnation and distension. Oriental waterplantain rhizome benefits urination and discharges kidney turbidity. Use the skunk bugbane to take the opposite and complement each other, while the Qingyang is rising, turbid Yin will fall down in order to help the effect of defecation. By this method, the body Yang qi is restored, the stool can be warm, the stool can be defecated.

From the above analysis, it can be seen that the treatment of constipation in children by qi is mainly to fill the qi of spleen and stomach, to promote the qi of liver and spleen, to direct the qi of lung and intestine downwards, or to clear the heat of lung and stomach, or to warm the Yang of spleen and kidney. In this way, Yin and Yang are harmonized, qi and blood flow, large bowel function is normal, and stool excretes smoothly.

4. Treating from blood

The Criteria for Syndrome and Treatment says: "Those with blood deficiency and body fluid depletion but oppilation... Although the stool is soft, you can't defecate it. In traditional Chinese medicine, blood originates from the spleen and stomach, and the heart dominates the blood, which is said to be involved in the generation of blood. The liver preserving blood belongs yin but uses Yang. The kidneys store essence, and the blood and essence interconvert. The sufficiency of qi and blood is closely related to the five zang-organs. If the body is deficient in blood, the intestinal organs will not be nourished by blood, then the intestinal conduction is not good, eventually constipation occurs. Studies have shown that constipation of blood deficiency type in children is relatively rare[13], which should also be paid attention to in clinical practice. In the treatment, Siwu decoction and Runchang pill can be used, and medicinal materials can be added or reduced to achieve the effect of "tonifying blood and nourishing blood" and "moisturizing intestine and purging". The commonly used herbs include Chinese angelica root, prepared rehmannia root, root of herbaceous peony, chuanxiong rhizome, cannabidis semen, peach seed, etc. Chinese angelica root is tonifying blood and activating blood, prepared rehmannia root is nourishing Yin and nourishing blood, root of herbaceous peony is tonifying blood, regulating Yin and reconciling ying, chuanxiong rhizome is promoting blood and qi circulation. After using both tonifying and channeling with the combination of the four herbs, Yin and Yang harmonize, body fluid with sufficient blood restores, stool moistens, Cannabidis semen and peach seed enhance the function of moisturizing intestine and defecating; Treating constipation in children from blood is mainly tonifying blood and nourishing blood.

5. Treatment from body fluid

Body fluid includes all the normal metabolic fluids of the body. The spleen and stomach are the sources of body fluid, which are derived from the participation of the small intestine and large intestine. The large intestine acting as a "official in charge of transportation" can further absorb the cereal essence of the substances from the small intestine, while expel the fecal matter from the body. The stool characters of children with constipation are mainly coarse and like sheep excrement, which is closely related to the lack of body fluid and the loss of moisture in the stool. Children such as the rising sun, are overflowing with vigour, their nature is active and love exercising, which consumes body fluid, while it is difficult to develop the habit of drinking water, so the stool maintains intestine in a long time, the body fluid is absorbed by the body, stool is easy to dry, rough

and hard. The normal metabolism of body fluid depends on the cooperation of various organs. Even though the etiology of constipation in children is complex, the deficiency of intestinal and body fluid is an objective existence. From this point of view, the treatment is mainly based on "Nourishing Yin and Producing fluid" and "moisturizing intestine and purging". Professor Qin Yanhong found that children with constipation often have dry and hot intestine and body fluid deficiency according to many years of clinical experience [14], so she used "Zengshui Xingzhou decoction" to assist children to purge, which was derived from Zengyue decoction, and played the role of "nourishment of Yin and moisturizing dryness, promoting qi and purging". Professor Jia Liujin often uses modified Zengyue Chengqi decoction to treat constipation in children, and the clinical effect is positive [15]. Common drugs include radix scrophulariae, dwarf lilyturf root, rehmannia, cannabidis semen, bunge cherry seed, biota seed, immature bitter orange, largehead atractylodes rhizome, etc. Radix scrophulariae is salty and cold, which is good at nourishing kidney yin, lowering lung fire, moistening dryness and generating fluid. Dwarf lilyturf root is sweet, cold and moisturizing, replenishing the lung and stomach fluid. Rehmannia is nourishing yin moistening dryness, clearing lung heat. The three seeds are high oil content, and can assist to moisten the stool, and play the role of nourishing yin, clearing heat and increasing fluid. Largehead atractylodes rhizome replenish spleen and stomach qi, immature bitter orange descends bowel qi. Qi and body fluid flow smoothly, the stool is soft and is easy to discharge.

6. Conclusions

Qi, blood and body fluid are closely related to constipation in children. Qi deficiency, qi stagnation and body fluid deficiency are often responsible for constipation in children. In practice, there is not only a single factor in clinical practice, but also qi, blood and body fluid at the same time. So in the treatment, invigorating spleen and regulating qi, nourishing Yin and promoting body fluid, and nourishing intestine and unblocking the bowels are the main methods. In addition, children's diseases change rapidly, deficiency and excess are mixed, timely and reasonable adjustment of medication can lead to qi and blood harmony, body fluid widely distributed, the stool unblocked.

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