

ARTICLE

Nursing Care of Traditional Chinese Medicine Fasting Therapy In Hemophilia Arthritis Patients

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Abstract

Review the nursing plan of 6 patients with hemophilia arthritis treated by Chinese medicine fasting therapy in Traditional Chinese Medicine Department from 2019 to 2021, the author summarize the nursing experiences of nursing plan, health education, coagulation factor infusion nursing, rehabilitation functional exercise nursing during the treatment, in order to improve the nursing and treatment effect of hemophilia arthritis patients by the treatment of Chinese medicine fasting therapy, and we can promote the recovery of patients and enhance the quality of life.

1. BACKGROUND

Hemophilia is a kind of hereditary coagulation factor deficiency disease. joint bleeding is the most common clinical manifestation it occurs in the knee, ankle, elbow, hip and shoulder joints frequently[1]. Frequent joint bleeding will stimulate synovial hyperplasia and inflammatory cell infiltration, causes hemophilic chronic synovitis periarticular tissue fibrosis and bone destruction, and finally result in joint deformity and hemophilia arthritis[2].

Recently, hemophilic arthritis patients can also receive surgery as the ordinary patients with the application of coagulation factor replacement therapy [3]. But it can't reduce the damage of hemophilia to bone and joint completely, It is more important to create a suitable joint environment for patients' rehabilitation exercise and physical therapy, otherwise, hemophilia is a hereditary disease, intra articular hemorrhage can occur in children from an early age[4], and repeated bleeding in the joint cavity accompanies the whole growth and development stage, it is related to joint growth and development, thus active non-surgical treatment should be given at the early stage of the disease to minimize the damage of hemophilia to bones and joints. However, some parents, out of their love for the sick children, can't bear to carry out rehabilitation training after joint bleeding, and the children's joints curl up in the wrong position, resulting in the inability to straighten the joints and

irreversible disability in the later stage. Obesity occurs because of lack of rehabilitation training, it aggravates the load and damage of joints, forming a vicious circle with hemophilia arthritis, finally, it accelerates the loss of joint function [5].

Fasting therapy is one type of calorie restriction, which had been used in Europe for decades. It can treat overweight, obesity, hyperlipidemia, hypertension, type 2 diabetes, metabolic syndrome, osteoarthritis, allergic diseases [6]. During the fasting therapy, all other foods are forbidden except water and a small amount of vegetable juice and fruit juice, life was kept by the energy storage in the body [7]. We improve the fasting therapy in clinical practice, and integrate traditional Chinese medicine in our department, we summarize a set of safe and effective traditional Chinese medicine fasting therapy and nursing plan, we found that it can reduce inflammatory reaction in hemophilic arthritis [8], also it can treat the obesity, it is beneficial to reduce joint load and improve the compliance of patients with rehabilitation training. Now we share the nursing experience in the treatment of hemophilic arthritis by traditional Chinese medicine fasting therapy.

2. CLINICAL DATA

Four hemophilic arthritis patients were admitted to our department from 2019.12 to 2021.10, of which two patients were hospitalized twice, with a total of 6 treatment cases; All the patients were male patients, aged 21–38 years old, mild to moderate hemophilia. Before the treatment, one patient had a BMI 24kg / m² and three patients had a BMI 28KG / m², joint bleeding pain and movement limitation had occurred in all the patients, mainly involving the knee and ankle joints. One patient had undergone right knee joint replacement, and still had intra-articular bleeding and pain after the operation.

After admission, all patients were supplemented with coagulation factor preparations, and therapied by fasting of traditional Chinese Medicine. The scheme was divided into three stages: buffer period, fasting period and recovery period [8]. The buffer period is 1-2 days, and 1.5kg fruit is taken every day. The fasting period is 5-7 days. In the morning of the first day of the fasting ,30g XuanMing powder was used to clear the intestines, take Chinese medicine orally every day and ensure sufficient water intake, and carry out low-intensity exercise. The recovery diet period is 1-3 days, and the diet will gradually transition from thin, soft and digestible food to ordinary diet. During fasting, more than 3000ml of water should be intake every day[8]. For patients with hemophilia and arthritis, they should exercise a little at the bedside every day; The body weight, fingertip glucose, blood pressure, waist circumference and other indicators are regularly monitored every day, and the traditional non-invasive Chinese medicine treatment methods such as Chinese medicine ear point pressing, beans Chinese medicine hot curing package, Chinese medicine directional penetration treatment and Chinese medicine fumigation treatment are assisted every day.

After treatment, the body weight and BMI index of all the patients decreased, as shown in Figure 1A and 1B (** P < 0.01) the average weight loss was 4.267kg, the average BMI index loss was 1.522kg/m², the post-fasting was significantly different from before-fasting; We used the numerical rating scale (NRS) to record the degree of joint pain; after fasting, we could find that post-fasting was lower than before fasting significantly, as shown in Figure 1C, the average decrease were 3 points, The joint pain of patients had been alleviated, and

they could intake daily rehabilitation training and functional exercise to recover some joint functions.

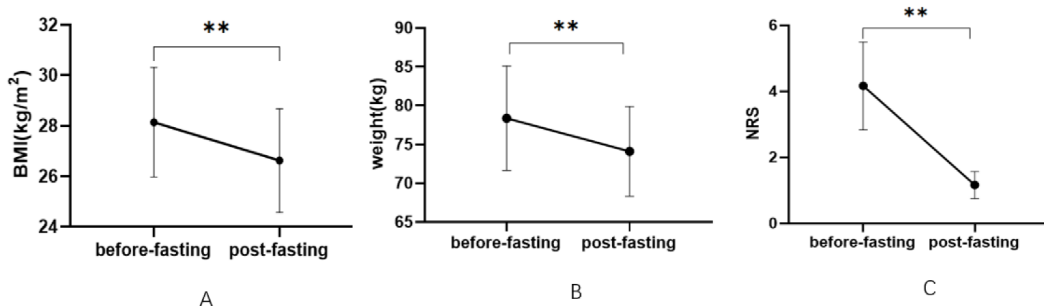


Figure A: BMI: body mass index; ** $p < 0.01$ versus post-fasting

Figure B: ** $p < 0.01$ versus post-fasting

Figure C: NRS: numerical rating scale; ** $p < 0.01$ versus post-fasting

Figure 1 BMI、Body Weight、NRS Scores

3. NURSING PLAN

(1) Set up a medical team of Traditional Chinese Medicine fasting therapy

Including 1 TCM fasting therapy expert, 1 attending physician, 1 resident physician and 2 responsible nurses. After admission, the patient was comprehensively assessed by the competent physician and signed some related informed consent forms.

(2) Health Education

Prevention of bleeding is an effective method to cure bleeding. we introduce the principledaily treatmentdietary requirements, contents and significance of various indicators and precautions in the treatment patiently. In daily life, we ask the patient to move gently and keep away from strenuous activities, dangerous sports such as boxingkicking or heavy physical work should be avoided to prevent joint bleeding. If necessary, wear knee pads. otherwise, they should be protected from infection and avoid damage of tonguelip and mouth, and prevent gum disease. Dental caries should be filled in time to reduce the chance of tooth extraction; In terms of drug use, anticoagulant drugs and drugs affecting coagulation function are prohibited for life, such as aspirin, butazone, indomethacin, dipyridamole and other drugs [9], and we should reduce intramuscular injection as far as possible; In the rehabilitation exercise, the body weight should be controlled, exercise should be taken to strengthen the muscles, the joints should not be stretched excessively and not Out of range of activities to prevent the joint bleeding.

(3) Mental Nursing

Hemophilia patients suffer from life-long repeated bleeding and can't live normally. Patients often have psychological reactions of anxiety, pessimism and despair. It is very important to solve the psychological problems of patients [10]. It is also a complicated nursing

work. We need to communicate and communicate with each other in beautiful language, happy mood and friendly attitude, create a warm and harmonious treatment environment, sympathize with and care for patients, reduce mental stress and reduce patients' pain.

In addition, Traditional Chinese medicine fasting therapy is one style of dietary therapy, which requires 3-5 days to limit food intake. For patients who are initially implemented, they are afraid of not being able to adhere to the whole treatment. we need to patiently and carefully do a good job in propaganda and education show the benefit of Traditional Chinese medicine fasting therapy and the hunger and safety problems that have been solved so far, so that patients can have a correct understanding, relieve and alleviate unnecessary fear anxiety Irritability and negative pessimism; At the same time, we also should show the therapeutic effect and mechanism of TCM fasting therapy on hemophilia arthritis, and establish the information and determination of patients to overcome the disease.

(4) Routine Nursing

The responsible nurse conducts nursing assessment on the patient, including body temperature, breathing, blood pressure, pulse, consciousness, physical activity, etc. In the joint bleeding period, the patient should reduce activities, keep a comfortable position, we put a soft pad under the knee and ankle joints, slightly raise the affected part, reduce blood pressure, slow down bleeding, facilitate the absorption of joint blood accumulation, closely observe the changes of vital signs and the fingertip glucose, If hypoglycemia occurs in the process of fasting therapy of TCM, report to the doctor in time and deal with it symptomatically.

(5) Nursing of coagulation factor infusion

The blood coagulation factor infusion enables the plasma coagulation factor concentration of patients to reach the hemostatic level [11]. All 6 patients in our department use coagulation factor VIII or IX regularly, and regularly monitor the coagulation factor level. During the nursing process, the storage and configuration methods of coagulation factors are strictly in accordance with the drug instructions, and the principle of rapid input immediately after thawing is mastered; The intravenous injection module with filter membrane is used for intravenous injection to ensure infusion safety.

(6) Observation of adverse reactions and nursing

The adverse reactions of TCM fasting therapy in the treatment of hemophilia arthritis mainly include: fatigue, joint pain and bleeding, hypoglycemia, electrolyte disorder and other adverse reactions. During the treatment period, 6 patients did not have the above adverse reactions, but nursing countermeasures were formulated for the above adverse reactions;

I. Weakness.

Weakness is a common adverse reaction during fasting. It is mainly related to energy deficiency, hunger ketosis and electrolyte disorder [12]. The general symptoms are mild and do not require special treatment. When there is obvious thirst, dizziness, headache and ketosis, the patient can be instructed to drink a lot of water and add L-carnitine according to the doctor's instructions; and we monitor electrolyte level and make sure of the supplement potassium and sodium if necessary.

II. Joint bleeding and pain

It can be treated by local Chinese medicine hot curing package, Chinese medicine

directional penetration therapy, acupoint application therapy, and supplement coagulation factors according to the doctor’s instructions. If necessary, we also use analgesic drugs to reduce the pain.

III. Hypoglycemia

If the fingertip glucose is lower than 2.9mmol/l, or there is obvious palpitation, sweating, hand shaking and other discomfort, oral glucose solution of 50-100ml is given. The blood glucose fluctuation of 6 patients during fasting is shown in Fig. 2A. The fasting fingertip glucose measured daily and the result was showed that hypoglycemic symptoms did not occur and the blood glucose is stable.

IV. Electrolyte disorder

Due to the fasting time of 3-5 days, the blood sodium and potassium may be reduced. However, sodium and potassium ions have been supplemented in the fasting, and electrolyte disorder is rare. During the fasting, the sodium and potassium ions of 6 patients are stable, traditional Chinese medicine and potassium chloride sustained-release tablets were supplemented according to the doctor’s instructions, and there was no low sodium and potassium, which confirmed the safety of Chinese medicine fasting therapy. The level of Na⁺ and K⁺ were is all normal, and they were shown in Fig. 2A and Fig. 2B.

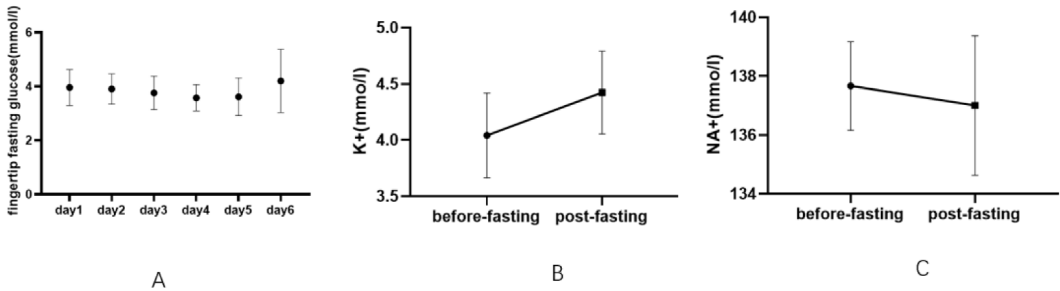


Figure2. Fingertip glucose、Na⁺、 K⁺

(7) Joint function exercise guidance

The purpose of treatment is to stop bleeding and detumescence as soon as possible, relieve pain and restore function to the maximum extent [13]. Functional exercise is mainly to maintain the muscle and joint movement function of the affected limb through active and passive activities, and prevent muscle atrophy, joint stiffness or swelling of the distal end of the limb due to slow venous return. Therefore, to guide the patient’s joint exercise, the emphasis includes the training of strengthening muscle strength and improving joint mobility, weight-bearing training, proprioception training, gait training and daily living ability training. In principle, the movement is stable and slow; Attach importance to isometric movement; Painless principle: pay attention to the patient’s own feelings. When the body sends out uncomfortable signals such as pain and swelling, carefully analyze whether it is caused by muscle fatigue or new bleeding; The amount of exercise should be properly

carried out according to the specific situation of the patient; Skillfully use the body weight and gravity to do resistance exercises, and tell the patient that the simplest action is the most appropriate. Exercise 2–4 times a day according to the patient's tolerance. In case of joint swelling and aggravation of pain, the exercise plan shall be adjusted in time to reduce the amount of activity and detect the activity of coagulation factor in time.

(8) Discharge guidance

In order to ensure the curative effect, it is necessary to inform the patients to control their diet after discharge, reduce the intake of meat and fat, start a healthy lifestyle and adjust the diet structure, so as to control their weight, maintain the follow-up effect of Traditional Chinese medicine fasting therapy, reduce joint load, and create favorable conditions for functional rehabilitation.

4. SUMMARY

Hemophilia arthritis can result in limitation of joint function. Active rehabilitation exercise can minimize the damage of hemophilia to bones and joints [14]. However, the dysfunction of joints and exercise are contradictory to each other, resulting in obesity and further aggravating the joint load. The fasting therapy of Chinese medicine has the mechanism of reducing inflammation and inflammation, can also reduce weight, and can create a favorable rehabilitation environment for hemophilia arthritis, High-quality nursing during the TCM fasting therapy can improve the effect of treatment, we shared the following nursing experiences:

- (1) strictly implement coagulation factor replacement therapy and level detection according to medical advice;
- (2) Pay attention to the psychological changes of patients and do a good job in psychological nursing;
- (3) Chinese medicine fasting therapy nursing management;
- (4) pay attention to personalized functional exercise guidance;
- (5) To guide the treatment and nursing of functional exercise. Through the implementation of the above measures, the joint mobility of 6 patients recovered well and all were discharged. After 3 months of follow-up, the patients' daily living ability returned to normal and their quality of life improved.

FUNDING

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