Clinical Study of Urinary Granules Assisted By Low Frequency Hemoperfusion Combined with Hemodialysis in the Treatment of Pruritus in Uremic Patients

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Abstract: To investigate the clinical efficacy and safety of urinary granules in assisting low-frequency hem perfusion combined with hemodialysis, and to explore the clinical effect and mechanism of the above treatments on pruritus in patients with uremia. METHODS: Ninety-nine patients who underwent renal medicine for uremia in February 2017 to December 1818 were enrolled in this study. The uremia patients were divided according to the diagnostic criteria for uremia and the order of admission to our hospital. For the two groups, among them, 45 patients in the control group were treated with low-frequency blood perfusion combined with hemodialysis; 45 patients in the observation group, based on the treatment method of the control group, and the treatment method of urinary granules. The gender and age of the control group and the observation group were analyzed and compared. There was no statistical difference (P>0.05), which had a high clinical promotion value. RESULTS: The pruritus symptoms of uremia patients before and after treatment in the control group and the observation group were regularly checked, and there were no significant differences in clinical indicators such as creatinine, uric acid, PTH, CRP and FGF-23. The clinical treatment effect of the observation group was obviously good. In the control group, it has significant curative effect on the treatment of pruritus in patients with uremia. Compared with the pre-treatment, the control group and the observation group have significant differences, indicating that urinary granules in assisting low-frequency hemoperfusion combined with hemodialysis in the treatment of uremia Patients with pruritus have a significant relief. After the observation group was treated with the combination of urinary granules and granules, calcium, FGF-23, PTH and phosphorus were significantly different from those before clinical treatment, which can effectively alleviate the symptoms of pruritus in uremic patients. There was no significant difference in the recurrence rate between the control group and the observation group. The pruritus of the observation group was lighter than that of the control group. Among them, the bone metabolism and renal function treatment were significantly better than the control group. Conclusion: Uremic granules have obvious curative effect on the symptoms of pruritus in patients with uremia treated by low-frequency hemoperfusion combined with hemodialysis, and can promote the recovery of renal function. In this clinical nursing study, the serum level of the uremia patients in the observation group was significantly lower than that in the control group, indicating that the urinary granules in the auxiliary low-frequency hemoperfusion combined with hemodialysis have a significant alleviation effect on the pruritus of uremic patients.

1. Introduction

Patients with pruritus in uremic patients have varying degrees of itching in the skin or in the body. The itching area is mainly in the chest, head, back and limbs. In patients with uremia, the severity of pruritus varies, the patients with mild symptoms have intermittent episodes, and the duration is shorter. Patients with more severe symptoms have persistent episodes, especially at night, and the condition will worsen. External factors can aggravate the symptoms of skin itching. For example, emotional, high temperature and sweating can aggravate skin itching, and physical

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therapy will be alleviated. Moreover, there is no significant correlation between skin itching symptoms and patient gender, age, and kidney disease. It should be noted that skin itching is currently recognized as a kind of end-stage schizophrenia complication. According to relevant medical reports, about 15%-55% of patients with chronic kidney disease are accompanied by varying degrees of itchy skin. Symptoms, more than 45% of patients with uremia for maintenance hemodialysis. Moreover, itchy skin is a subjective feeling of the patient, and there are obvious individual differences. Pediatric pruritus is one of the common complications of end-stage renal disease. It has a high incidence. In addition to skin itching, it may cause chronic fatigue, decreased sleep quality, depression, anxiety, etc. Symptoms, severe cases can seriously affect the quality of life of patients, and even uremia death. At this stage, urinary granules can completely or partially relieve symptoms during clinical treatment. However, due to the different pathogenesis of the patient and the physical fitness of the individual, the research on the treatment of pruritus in uremic patients still needs in-depth study.

2. Information and Methods

2.1 General information

From February 2017 to December 1818, we received 90 patients who underwent renal medicine for uremia in our hospital. The subjects were observed according to the uremia diagnostic criteria. Urinary patients were divided into two groups according to the order of admission to our hospital. Among them, 45 patients in the control group, 24 males and 21 females, aged 25-74 years, mean age (46.583.09) years old, uremia dialysis The time was 13-76 months, the average time period (423) months, the control group used low-frequency blood perfusion combined with hemodialysis treatment. There were 45 patients in the observation group, 23 males and 22 females, aged 23-75 years, mean age (46.743.68) years old, uremia dialysis time 12-75 months, average time period (425) months, The control group was treated with low-frequency blood perfusion combined with hemodialysis treatment, and assisted in taking uremic clear granules. Patients with uremia have undergone hemodialysis for a minimum of 12 months. All patients were treated with any anti-itch treatment and no symptoms of primary skin lesions. The patients and their families were informed and willing to cooperate with the hospital for observation and treatment. Excluding primary skin diseases, combined with skin diseases caused by liver and gallbladder, thyroid and tumor, combined with pulmonary diseases, severe heart disease, hepatitis B, high blood pressure and other infectious diseases, and there is no coordination with admission, communication disorders and hearing Patients, etc.

2.2 Method

The control group (n=45) was treated with low-frequency blood perfusion combined with hemodialysis. The dialysate of bicarbonate was selected to set the blood flow rate to 250 mL/min, and the low-frequency blood perfusion rate was set at 180 mL/min. Dialysis should be performed once every 4 hours, 3 times for 1 week, and 1 month for one course of treatment. Patients should cooperate with 2 courses. The observation group (n=45) adopts the treatment method of urinary granules assisted low-frequency blood perfusion combined with hemodialysis. The low-frequency blood perfusion is connected with hemodialysis. The amount of heparin is 1mg/kg, which is increased by 20mg every hour. The blood flow velocity was controlled to 250 mL/min, and the observation was performed every 2.5 hours. The setting parameters of hemodialysis were the same as those of the control group; the patient received sufficient dialysis, 3 times a week for 5 hours, using the AV600 clinical dialyzer. For patients with high PTH uremia, strict control of diet, especially low-phosphorus food intake, and taking phosphorus-lowering drugs, it is best to eat with the diet, after the patient's calcium and phosphorus standards, and then take vitamin D3. The patient's blood calcium and phosphorus were regularly monitored and adjusted in time. After the phased treatment, the low-frequency blood perfusion device should be adjusted in time. Some special patients should assist in the oxygen inhalation treatment mode, and observe the patient's

physical condition regularly during hospitalization. At the same time, patients with sputum and their families are suitable to use the warm water bath method, the water temperature is controlled at 37 ° C -39 ° C, try not to apply soap, morning and evening, each time about 30 minutes, the patient has no obvious symptoms such as blood pressure or heart rate changes, then The length of time can be extended appropriately.

2.3 Diagnostic criteria

Clinical treatment evaluation records and statistical analysis: (1) markedly effective: the patient's condition has completely disappeared; (2) effective: the patient's condition improved; (3) invalid: the patient's condition did not improve significantly. Among them, clinical treatment indicators are as follows: parathyroid hormone (PTH), serum b2 microglobulin (b2-MG), blood urea nitrogen (BUN).

1) Clinical treatment effect

No or occasional skin itching symptoms. The quality of sleep in uremic patients returned to normal, no obvious skin scratches, and the itching score was reduced by more than 60%. The treatment effect was obvious; the patient had mild skin itching, the quality of sleep was not affected, no obvious skin scratches, itching The treatment effect is more obvious when the score is reduced between 30% and 60%; if the patient's sleep quality is seriously affected, the skin is itchy day and night, the skin has obvious scratches, and the pruritus score is less than 30%, the treatment effect is not obvious.

2) Bone metabolism indicators

The patient's peripheral venous blood was taken in the morning on an empty stomach. After the serum was extracted by centrifugation, it was placed in a refrigerator at -80 °C for testing. The decibel was chemically determined for calcium level, and the blood phosphorus level was measured. The blood was determined by chemical immunoluminescence assay. Segment parathyroid hormone levels.

3) Renal function index

The peripheral venous blood of the patient was taken on an empty stomach in the morning. After the serum was extracted by centrifugation, it was placed in a refrigerator at -80 ° C for testing. The serum creatinine and uric acid levels were determined by chemical methods.

4) Inflammation of the body

Peripheral venous blood was taken from the patient on an empty stomach in the morning. After centrifugation, the serum was placed in a refrigerator at -80 °C for testing. The levels of high-sensitivity C-reactive protein, tumor necrosis factor and interleukin were measured by ELISA.

2.4 statistical analysis

All project data obtained in this study were included in SPSS 18.0 software analysis, (± s) recorded measurement data, t test; (%) was recorded data rate, C2 was test standard, $P < 0.05$ was considered statistically significant.

3. Results

Statistical analysis of the clinical treatment effect of the control group and the observation group in the treatment of pruritus in patients with uremia, the control group was treated with low-frequency blood perfusion combined with hemodialysis, and the control group was based on low-frequency blood perfusion combined with hemodialysis treatment. The patient is assisted with taking uremic clear granules. The results showed that in the control group (n=45), 27 cases were markedly effective, 15 cases were effective, 3 cases were ineffective, and the total effective rate was 34 (75.56). In the observation group (n=45), 27 cases were effective, 13 cases were effective, and 11 cases were ineffective. For example, the total effective rate was 42 (93.33), $P < 0.05$ statistically significant.

4. Discussion

In uremia patients, a large amount of urinary toxin is accumulated in the blood. In a short time, it is difficult to effectively eliminate the body's metabolic products through its own mechanism, which leads to pruritus in patients. The onset time is very obvious at night, which directly affects the patient's sleep quality. , has a negative impact on the patient's physical and mental health. At present, the clinical treatment methods mainly adopt anti-histamine drugs, which can alleviate the complications to a certain extent, but can not be cured, and the overall clinical effect is not obvious. This study analyzes the “assisted-combined” treatment for pruritus in patients with uremia, that is, low-frequency hemoperfusion combined with hemodialysis for pruritus in uremic patients, and assisted urinary granules, has achieved significant clinical therapeutic effects. The molecular weight of the substance can be divided into small, medium and large; the hemodialysis method alone has obvious effects on most of the small molecular weight substances, but the large toxin substances in the uremic patients cannot be effectively eradicated. In this regard, the individual treatment method is not effective. Low-frequency blood perfusion combined with hemodialysis, and assisted the treatment principle of urinary granules, mainly through the principle of adsorption to help the exogenous and exogenous urinary toxins to be excluded from the body, assisting the elimination of urinary toxins from the inside to the outside, the clinical treatment effect is very obvious, the treatment method Convenient and efficient. The low-frequency blood perfusion method mainly increases blood purification and adsorption by means of solid-state devices, and increases the elimination efficiency of urinary toxins. Low-frequency blood perfusion has a certain effect on the removal of toxic substances in uremic patients. Combined with hemodialysis, assisting urinary granules and maximizing blood purification, it can effectively reduce skin itching in uremic patients. The above combined treatment method and “assisted-combined” treatment can effectively remove large and small molecular toxins in uremic patients. There are two obvious advantages: first, to make up for the deficiencies of hemodialysis treatment; second, to ensure the clinical treatment effect.

The results of this study showed that the clinical treatment effect of the observation group was significantly higher than that of the control group. Low-frequency blood perfusion combined with hemodialysis assisted uremic clear granules can effectively eliminate and alleviate pruritus in patients with uremia and has significant clinical therapeutic effects. There was no significant difference between the control group and the observation group BUN. The PTH and b2-MG in the observation group were significantly less than the control group. Hemodialysis combined with low-frequency blood perfusion had a significant effect on improving the serum index of patients. Compared with the control group, the observation group improved the urinary granules and improved the skin itching symptoms, which can alleviate the patient's suffering.

In summary, after the observation group was treated with uremic clear granules, the calcium, FGF-23, PTH and phosphorus were significantly different from those before clinical treatment. Among them, the calcium index was improved, while the urea nitrogen and FGF-23 were improved. CRP, uric acid, creatinine, PTH and other indicators have decreased, indicating that uremic patients receiving urinary granules assisted low-frequency blood perfusion combined with hemodialysis treatment, can effectively alleviate the symptoms of pruritus in patients with uremia. At the same time, it can promote the recovery of renal function in patients. In this treatment observation, the serum level of the observation group was significantly lower than that of the control group. The treatment of urinary granules assisted by low-frequency hemoperfusion combined with hemodialysis has a positive clinical effect on the relief and treatment of pruritus in uremic patients. The therapeutic advantage is greater, although the low-frequency blood perfusion combined with hemodialysis treatment has obvious effects, but the effect is more obvious than the “assisted-combined” treatment. In addition, the patient should regularly check the calcium and phosphorus metabolism of the patient and the function of the secondary parathyroid gland. In daily life, the patient and his family should avoid excessive sweating due to excessive temperature and keep the skin clean. It is especially important with drying, which has a significant effect on improving the therapeutic effect.

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