

Clinical Nursing Study of Self-developed Xiaofu Shengji Ointment on Stage I and II Pressure Ulcers

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Abstract: Objective: To observe the clinical effect of Xiaofu Shengji Ointment on pressure sore. Method: Forty patients with pressure sore were randomly divided into observation group and control group. On the basis of routine treatment, the observation group was coated with Xiaofu Shengji Ointment, and the control group was treated with traditional dressing method. Results: After treatment, the effective rate of the observation group was 92.59%, and the effective rate of the control group was 66.67%. Conclusion Xiaofu Shengji Ointment has a remarkable clinical effect in the treatment of pressure sore, and it is worth popularizing and applying in clinic.

1. Introduction

Pressure sore is caused by prolonged compression of skin and subcutaneous tissue and poor blood circulation, resulting in local ischemia and ulceration or necrosis. The new definition of NPUAP pressure sore in 2007 refers to the localized injury of skin or subcutaneous tissue at the protuberance of bone due to pressure, or combined shear or friction [1]. The predilection site is a often stressed bone protuberance, such as scapular process, sacrococcygeal bone, great trochanter of femur, tubercle of ischium, heel or Posterior occipital part [2]. Pressure sore care is a basic care job for bedside care work. The bedside care work is very important. In the quality of care examination, the incidence of hospital care foundation pressure sore is 0%. However, often in receiving patients in hospital, some patients in the hospital before the occurrence of pressure sore, so, for such a group of patients care has become a key issue. With the implementation of the "National quality Nursing Services Project" carried out by the ministry of health, hospital Nursing managers and Nursing workers pay more attention to pressure sore Nursing. This project is a combination of Qiqihar Jianhua Hospital, Qiqihar City Hospital of Traditional Chinese Medicine, The Third Affiliated Hospital of Qiqihar Medical University in the clinical joint application of Chinese medicine to pressure sore care, through nursing practice effect is remarkable. Through the research of this project, it can promote the healing of patients' pressure sore, strengthen the basic nursing, make patients and their families satisfied, reduce the economic expenses of patients, promote the treatment of primary diseases, and improve the quality of nursing services. Thereby improving the social and economic benefits of the hospital.

2. Clinical data

2.1 General information.

From July 2016 to June 2017, 40 bedridden patients, 11 males and 9 females, aged from 48 to 88 years, with an average age of 71.5 years, were selected from three hospitals and their nursing and geriatric hospitals. Cerebrovascular disease was found in 8 cases, tumour in 4 cases, paraplegia in 6 cases and other diseases in 2 cases. Pressure sore has a maximum area of 6 cm x 5 cm and a minimum area of 1.5 cm x 2 cm. Pressure sore is located at sacroiliac 35, hip 8 and ankle 6, phase I

pressure sore 39 and phase II pressure sore 10. They were randomly divided into observation group (20 cases) and control group (20 cases). There was no significant difference in gender, age, area and pressure sore location between the two groups ($P > 0.05$), which was comparable.

2.2 Diagnostic code.

The pressure sore staging is in accordance with the new classification of NPUAP2007 pressure sore [3]. Phase I: The skin at the bony prominence is complete with a localized erythema that does not fade. Dark skin may have no noticeable pale change, but its color may be different from the surrounding tissue. Phase II: Partial dermal deficiency, manifested as a shallow open ulcer with pink wound bed (wound), no carrion, or a complete or ruptured serum blister.

2.3 Inclusion criteria selection.

Among the four hospitals and nursing homes, hospice hospital I phase of pressure sore and II pressure sore patients as the research object. At least 18 years of age; Volunteered to participate in this research and signed the informed consent, with good compliance.

2.4 Exclusion Criteria.

As follow:

- (1) Patients with severe primary diseases such as liver, kidney and hematopoietic system, patients with mental illness, tumour or AIDS
- (2) Patients who are participating in other clinical trials
- (3) Severe excess of liver and kidney function beyond normal range
- (4) Suspected or true history of alcohol and drug abuse
- (5) Pregnant or lactating woman, allergic
- (6) Complicated with other serious infections, critically ill persons

3. Research method

3.1 Grouping method.

The experimental group was treated and nursed by Xiaofu Shengji Ointment, while the control group was treated and nursed by traditional dressing change. Then respectively of the experimental group and control group of pressure sore patients with pressure sore wound nursing effect assessment, observe the pressure sore organization of rot muscle, activating blood circulation and of blood stasis, analgesic effect and so on hemostasis, the folding of the raw flesh. It can reduce swelling, reduce purulent secretions, resist bacteria and inflammation, improve microcirculation, enhance the activity of normal cells and promote wound healing. Promote the histopathological observation of wounds by promoting the repair of granulation tissue and epithelial cells.

3.2 Composition of prescriptions.

Xiaofu Shengji Ointment: semen armeniacae amarae 4 money, borneol 2 money, liquorice 3 money, Radix liquiritiae 3 money, myrrh 4 money, RADIX REHMANNIAE8, rubber Powder5 money, Angelica sinensis 4 money, calamine-Ounce 4 money, yellow white wax 2 Ounce, made half a kilo. Boil down. Functional indications: pain due to blood stasis, myogenic pain relief, subdging swelling and detoxicating.

3.3 Clinical experimental methods.

Patients with pressure sore (pressure sore I ~ II) were screened and grouped into groups of 20, with control group and experimental group. The control group used the traditional dressing method (the wound can be cleaned with sterile saline or 1:5000 nitrofurazone solution, then wrapped with sterile vaseline gauze and dressing, and the dressing is changed once every 1-2 days).

In the experimental group, Xiaofu Shengji lard, a self-developed traditional Chinese medicine, was used to treat and nursing pressure sore patients twice a day. The wound surface was first cleaned with sterile saline or 1:500 furacilin solution, and then the self-developed Xiaofu Shengji

lard was applied. Pressure sore nursing assessment was carried out after one week, two weeks, three weeks and four weeks.

3.4 Effectiveness evaluation criteria.

First, the observation of traditional Chinese medicine nursing methods for pressure sore wounds. Second, the evaluation of pressure sore wound care assessment tools. Thirdly, histopathological observation of wounds. According to the standard of pressure sore prevention and the preventive effect approved by some nursing experts, the following criteria were formulated: the effect was remarkable: pressure sore improved from I to II. The blood of the compressed part of the skin is well circulated, and there is no redness, heat or tenderness in the part, and the blisters disappear. Effective: skin can be red, hot, no tenderness, blisters improved; invalid: red, hot, tender or indurated skin, blisters, skin damage, tissue necrosis, etc.

4. Results

4.1 The pressure sore healing was compared between the two groups.

The observation group was cured in 18 places, improved in 7 places, 2 cases were not cured, and the effective rate was 92.59% (25/27). The control group cured 12 places, improved 8 places, and did not heal 10, the effective rate was 66.67% (20/30). The effective rate of the observation group was significantly higher than that of the control group, and the difference was statistically significant ($P < 0.05$). See Table 1.

Table 1 Comparisons of pressure sore healing in two groups

Group	Number of cases	Cure	To become better	Healed	Effective rate (%)
Control group	20	12	8	10	92.59
Observation group	20	18	7	2	66.67

4.2 The results of adverse reactions were compared between the experimental group and the control group.

Xiaofu Shengji lard was used to find out that there were significantly fewer adverse reactions than traditional methods. After ranksum test, $u = 22.15$ and $P < 0.01$, there was significant difference and statistical significance between the two groups. Note: Xiaofu Shengji lard has high safety to use.

5. Discussion

Pressure sore is caused by the internal and external factors of the body. Internal factors refer to malnutrition, metabolic disorders, and decreased resistance of the patient's body; external factors refer to local long-term compression or external stimulation that causes local tissue blood circulation disorders, causing local skin ulceration and tissue necrosis [1]. Pathologically, pressure sore is a local tissue degeneration and necrosis produced by a combination of systemic or local factors [3].

5.1 Risk factors of pressure sore.

A. Local factors leading to pressure sore. Local factors mainly include pressure, friction, shear force and humidity [1]. The pressure on local tissues is mainly caused by gravity. Pressure is the most important factor in plane mechanics. Pressure sore was thought to occur only in long-term bedridden people, but now it has been proved that ulcers can occur in any part of the body as long as enough pressure is applied and enough time is allowed. Pressure can cause local ischemia and peripheral vasodilation. Fixed immobility (limited activity) is also one of the causes of pressure sore. The peripheral arteriolar pressure of the human body is 4.27 kPa (32 mm Hg), and the microvessel pressure of the limbs is 16 kPa (12 mm Hg). When the skin is subjected to a continuous pressure of 9.3 kPa (70 mmHg) for 2 hours, irreversible Change, and if the skin continues to be under low

pressure for a long time, the damage generated will be greater than the damage caused by high pressure in a short period of time. Normally, normal people will have at least 50 spontaneous turns when they sleep at night. If this spontaneous turn-over occurs less than 20 times, the chance of a pressure sore is extremely high [3-4]. Patients for treatment to the seat or a seat, if the head $> 30^\circ$, in order to prevent the decline in patients with bended leg at the same time, under this body sacroiliac and heel are under the influence of friction force and shear force, friction force and shear force cannot separate cause ulcers, but can promote and aggravate ulcers. Moisture can be caused by incontinence, drainage fluid pollution, sweating, etc., leading to skin maceration, soft, easy to shear force and friction injury. Under humid environment, the risk of pressure sore will increase by 5 times [5].

B. The systemic factors leading to pressure sore. There are mainly sensory loss, malnutrition, insufficient tissue perfusion, age, body mass, body temperature, mental and psychological factors.

(1) Patients with sensory loss do not feel the pain stimulus of excessive compression, so they do not automatically change their position or require a change of position. It is easy to cause excessive and long-term pressure on some local skin of the body.

(2) Malnutrition and old patients, subcutaneous fat reduction, atrophy, skin flabby, poor elasticity, groove and deep; Sebaceous gland reduces, atrophy, secrete decreases accordingly, make skin surface dry, coarse, lackluster, not slippery, serious person can appear chaff batchy fall off; Sweat gland reduces, atrophy, reduced the excretory function of the skin and the function of regulating body temperature. The decrease of epidermal cells and slow regeneration make the skin thinner, reduce the capillaries under the skin, reduce the blood flow, directly affect the supply of nutrients, make the skin more easily damaged, wound healing more difficult

(3) Insufficient blood flow in the tissue leads to hypoxia, affects the nutrient supply of the tissue, and reduces skin resistance.

(4) Older people, thin people, those with too high or too low body temperature, and those with depression are prone to pressure sore. It has been found that for every 1°C increase in body temperature, the oxygen requirement of tissue metabolism increases by 10% [6]. When continuous stress causes tissue ischemia, the increase in temperature will increase the susceptibility of pressure sore. If the soft tissue is in the dangerous time limit of ischemia caused by compression, necrosis will occur more easily when the temperature of the tissue in the compression area rises. In addition, unreasonable use of hot water bags and ice bags will also affect local metabolism, or make local blood vessels constrict, reduce blood supply, thus playing a harmful role. It has been reported that 83% of clinical pressure sores occur in the early stage of the disease [7].

(5) TCM theory etiology and pathogenesis. The long-term cause of pressure sore, deficiency of Qi and blood, qi as the commander of blood, deficiency of Qi can't run with Blood, resulting in poor blood flow, qi-blood deficiency and stagnation. The external cause is due to the long-term local body gravity, friction or squeezing force, poor blood and blood running, meridian obstruction, local skin dystrophy, long-term ischemia, necrosis, carrion and sore [8]. "all sores come from the absence of Rong Wei, the stagnation of qi and blood, which is the cause of carbuncle and swelling.", "all the ulcers are caused by stagnation of qi and blood."

5.2 Pressure sore prevention.

The occurrence of clinical studies have shown that pressure sore is prevenTable, and pressure sore prevention is more important than treatment, stage I pressure sore is by changing the position of the intervention of the right way to heal, all kinds of prevention guidelines and many related studies, both the pressure sore prevention focus mainly on how to avoid and intervention pressure sore risk factors, including local stress, relieve skin $>$ defense layer of protection, nutritional support, and psychological counseling, etc. Pressure sore is closely related to effective treatment and nursing programs. In a sense, reasonable nursing programs can reduce the incidence of pressure sore and reduce the incidence, which is to say, fundamentally relieve the high fatality rate of pressure sore. Therefore, we should pay attention to the following points in nursing. □

(1) To alleviate local pressure, the specific approach is to change position on time, time roll over,

every 2 to 4 hours turn over, use anti-pressure gasket, to reduce pressure sore wound and bone prominent pressure, improve local blood supply.

(2) The turning should be gentle, to avoid sudden force and violence, vertical lift patients, avoid parallel drag, to avoid the loss of skin and other local organizations, after turning over in a timely manner to arrange the sheets and clothes flat;

(3) Keep the bedding neat, clean and dry, and replace the contaminated clothes and bedding in time.

(4) Keep the skin clean and dry, wipe the whole body in time, pay attention to gentle and rapid movements, wipe the water temperature should not be too high, pay attention to cold and warm.

(5) Local blood supply and skin condition should be observed in pressure sore-prone areas. Shampoo powder can be used locally to reduce friction. Local hot compress can promote blood flow in bone processes, such as the tail of the skull, knee, elbow, ankle, auricle and so on.

(6) Strengthen nutrition, enhance the patient's resistance, patients should be based on high protein, high calorie, high vitamin diet, eat less meals, correct hypoproteinemia, if necessary, take nasal or parenteral nutrition support to ensure nutrition Adequate supply of material.

(7) Actively treat the primary disease, improve the general condition, and avoid the occurrence of pressure sore.

(8) Carry out relevant knowledge of patients and their families, introduce the mechanism of occurrence of pressure sore, development process, hazards and the focus of treatment and nursing work, so that patients and their families actively participate in self-care, consciously cooperate with treatment, and restore health as soon as possible.

Although the level of basic nursing in hospitals has improved in recent years and the incidence of pressure sore in hospitals is low, many patients have not received good care outside the hospital, and pressure sore is still common. Pressure sore has a lot of medicines and methods. In most primary hospitals, the combination of surgical dressing change and antibiotics has a long healing time and poor curative effect. Traditional Chinese medicine considers pressure sore as deficiency of Qi and blood, qi-stagnancy and blood stasis, Channel obstruction, failure of skin and muscle to be nourished, treatment for Qi to promote blood circulation, dispersing blood stasis and collaterals, dispelling dampness and toxin, removing slough and promoting growth of tissue regeneration. Drugs can keep the sore surface moist and suitable temperature, which is conducive to pressure sore healing. The main ingredients of traditional Chinese medicine preparations are *Scutellaria baicalensis*, golden cypress and the rhizome of Chinese goldthread. They all have the functions of clearing heat, detoxification, pain relief and muscle regeneration [9].

This study shows that after applying the Xiaofu Shengji Ointment on the wound surface, the wound is kept moist for a long time, which provides a good external environment for healing and is not easy to stick during dressing change. In addition, Xiaofu Shengji Ointment can alleviate pain, improve nutritional absorption of local tissues, improve blood circulation, promote the repair of granulation tissue and epithelial cells, removing rot muscle, activating blood circulation and removing blood stasis, analgesic hemostasis, astringent muscle and other effects, can reduce swelling, reduce abscess secretions, anti-bacterial and anti-inflammatory, improve micro-circulation. Circulation enhances the activity of normal cells and promotes wound healing. 在 In this group of data, the effective rate of the observation group was significantly higher than that of the control group, indicating that Xiaofu Shengji Ointment has a remarkable effect on the treatment of pressure sore, which is convenient to use and worthy of clinical application.

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