

Clinical Effect of Qibai Landslide on Jellyfish Injuries in Qinhuangdao City

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Abstract: Objective. To investigate the clinical effects of phlegm and phlegm and magnesium sulfate combined with magnesium sulfate in sea lice in Qinhuangdao City. **Methods.** A total of 78 patients with sea lice in Qinhuangdao City from June to May 2018 were enrolled. They were randomly divided into control group (n=39 cases) and observation group (n=39 cases). The control group was treated with magnesium sulfate. The observation group was treated with Qibai Colshi Decoction on the basis of the control group. The effect of the patients was evaluated after 5 days of treatment. The disappearance time of symptoms, inflammatory factors and adverse drug reactions were compared. **Results.** After treatment, the onset, pain time, skin loss, swelling time and course of treatment were shorter in the observation group than in the control group ($P<0.05$). The levels of inflammatory factors were lower than those before treatment ($P<5$). The levels of TNF-a, IL-6, HIS and 5-HT in the observation group were lower than those in the control group ($P<0.05$). The rash, itching, drug allergy, liver and kidney were observed in the observation group and the control group. There was no significant difference in the incidence of dysfunction and blood pressure ($P>0.05$). **Conclusion.** The combination of magnesium sulfate and magnesium sulfate in the treatment of sea lice in Qinhuangdao City can shorten the disappearance of symptoms, reduce the level of inflammatory factors, and increase the incidence of adverse drug reactions. It is worthy of popularization and application.

Keywords: Qibai landslide, Magnesium sulfate, Qinhuangdao City, Sea lice injury, Application effect

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1 Introduction

Sea otter, also known as jellyfish, is a kind of coelental mollusc living in the sea. It is hemispherical and edible. It has an umbrella shape and can flex freely^[1]. Clinical studies have shown^[2]: sea otters are mostly inhabiting offshore waters, especially prefer to inhabit near Haikou, and depending on the variety of sea otters, the release of toxins and the degree of damage to the human body are different. The toxins contained in the jellyfish jellyfish can stimulate the human body, and the clinical manifestations are severe pain and unconsciousness, and can be eliminated by themselves for many days^[3]; while the seabuck jellyfish is the most lethal jellyfish, and the secreted toxin is fatal. (After 3-5 minutes of bruising, it can cause death)^[4, 5]. Qinhuangdao City is a famous coastal city, resulting in a high rate of sea lice in the region. Therefore, strengthening the treatment and nursing of sea lice injury in Qinhuangdao City is of great significance to improve the prognosis of patients^[6]. Magnesium sulfate is a commonly used treatment for patients with sea lice, which maintains the balance of water and electrolytes and supplements magnesium ions in the body. At the same time, the drug can exert anti-inflammatory and analgesic effects. The cypress sputum stain is a commonly used therapeutic medicine in clinical practice, which can exert the effects of clearing away heat and dampness, purging fire and detoxification, reducing inflammation and relieving pain, but there are few applications of two drug treatments in patients with sea lice injury^[7]. Therefore, this paper conducts research on patients with sea lice in Qinhuangdao City, and discusses the clinical effects of sputum splatter and magnesium sulfate in sea lice in

Qinhuangdao City. The report is as follows.

2 Information and methods

2.1 Clinical data

78 patients with sea lice injury in Qinhuangdao City from June to November 2018 were selected and randomly divided into control group and observation group. There were 39 patients in the control group, 21 males and 18 females, aged (16-63) years old, with an average of (46.43±5.67) years; duration (1-7) h, mean (3.41±0.59) h. The wounded parts: 11 cases of upper limbs, 17 cases of lower limbs, 8 cases of chest and abdomen, and 3 cases of back. There were 39 patients in the observation group, 20 males and 19 females, aged (15-64) years old, with an average of (47.29±5.71) years; the course of disease (1-8)h, mean (3.46±0.62) h. The wounded parts were 9 cases of upper limbs, 18 cases of lower limbs, 9 cases of chest and abdomen, and 3 cases of back. There was no statistically significant difference between the two groups ($P>0.05$).

2.2 Inclusion and exclusion criteria

Inclusion criteria: (1) all meet the diagnostic criteria for sea lice injury^[8]; (2) those who stayed in the sea or injured because of sea lice; (3) they have clear consciousness and can communicate and communicate with doctors. Exclusion criteria: (1) those with severe liver and kidney abnormalities or those with respiratory or hematological diseases; (2) those with other marine biological exposure or other causes of skin lesions; (3) combined with allergies, pregnancy Period or lactation or incomplete admission information.

2.3 Methods

Both groups were routinely given supportive treatments such as oxygen inhalation, warmth, anti-infection, sedation, and fluid replacement. Control group: treated with magnesium sulfate. Each time, magnesium sulfate (Hebei Province Wuluo Pharmaceutical Co., Ltd., National Pharmaceutical Standard H13022977) was

mixed with 250 mL of normal saline, intravenously, once a day for 5 days (1 course)^[9, 10]. Observation group: On the basis of the control group, combined with the treatment of phlegm and sputum. Recipe: Astragalus, borneol, cork, borax is ground into a powder according to a ratio of 1:1:1:1, and ground into a paste with vinegar, and evenly spread on cotton paper, the thickness is 2-5mm, externally applied to the lesion Use a breathable tape to fix it. After 4-6 hours, replace it once, remove the dressing medicine, wash it with warm water, and continue treatment for 5 days (1 course).

2.4 Observation indicators

(1) The time when the symptoms disappeared. The onset of action, pain time, skin loss, swelling time and course of treatment were recorded. (2) Inflammatory factors. 3 mL of peripheral venous blood was taken in the fasting state of the two groups before treatment and 5 days after treatment. After serum separation, TNF- α and IL-6 were performed by enzyme-linked immunosorbent assay. (3) Interleukin 8 (IL-8), complement C3 (C3), pain-causing substance P (SP), histamine (HIS), serotonin (5-HT) level^[11, 12]; (3) safety. The incidence of rash, itching, drug allergy, liver and kidney dysfunction, and elevated blood pressure^[13, 14] were recorded after treatment.

2.5 statistical analysis

It is processed by SPSS18.0 software, and the count data is tested by 2. It is represented by n(%), and the measurement data is t-test. indicates that the difference of $P<0.05$ is statistically significant.

3 Results

3.1 Comparison of the disappearance time of symptoms in the two groups

The onset of action, pain time, skin loss, swelling time and course of treatment in the observation group were shorter than those in the control group ($P<0.05$), as shown in Table 1.

Table 1. Comparison of the disappearance time of symptoms in the two groups($\bar{x} \pm s$)

| Group | Onset time (min) | Pain time (d) | Skin loss time (d) | Swollen time (d) | Treatment (d) |
|-------------------|------------------|---------------|--------------------|------------------|---------------|
| Observation group | 4.30±1.12 | 2.49±0.51 | 2.85±0.64 | 3.14±0.83 | 6.12±1.26 |
| Control group | 7.41±1.36 | 5.32±0.73 | 6.34±0.74 | 6.81 | 12.49±2.14 |
| t | 6.316 | 7.213 | 5.398 | 7.893 | 5.009 |
| P | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

3.2 Comparison of inflammatory factors between the two groups

There was no significant difference in the levels of inflammatory factors between the two groups before treatment ($P>0.05$). The levels of inflammatory

factors were lower than those before treatment ($P<0.05$). The TNF-a was observed 5 days after treatment. The levels of IL-6, HIS and 5-HT were lower than those of the control group ($P<0.05$), as shown in Table 2.

Table 2. Comparison of two groups of inflammatory factors ($\bar{x} \pm s$)

| Group | | TNF-a(ng/L) | IL-6(ng/L) | HIS(ug/L) | 5-HT(ng/L) | IL-8(pg/ml) | SP(pg/ml) | C3(ng/L) |
|--------------------------|--------------------|----------------|--------------|-------------|-----------------|----------------|----------------|----------------|
| Observation group (n=39) | Before treatment | 364.38±34.62 | 29.58±3.24 | 12.15±1.50 | 2314.29±45.69 | 121.63±22.37 | 117.32±24.36 | 75.28±14.63 |
| | 5d after treatment | 253.98±24.41ab | 21.23±2.98ab | 6.48±1.13ab | 1423.64±24.61ab | 75.28±19.36 ab | 85.48±11.63 ab | 52.14±10.86 ab |
| Control group (n=39) | Before treatment | 365.21±34.69 | 29.59±3.25 | 12.16±1.52 | 2315.43±44.76 | 122.56±23.10 | 118.65±25.31 | 75.85±13.97 |
| | 5d after treatment | 312.19±31.23b | 25.69±3.11b | 10.21±1.37b | 1935.38±29.62b | 35.24±11.56 b | 56.21±11.25 b | 31.56±9.74 b |

Compared with the control group, a $P<0.05$; compared with before treatment, b $P<0.05$

3.3 Comparison of safety between the two groups

There was no significant difference in the incidence of rash, itching, drug allergy, liver and kidney dysfunction

and blood pressure elevation between the observation group and the control group ($P>0.05$), as shown in Table 3.

Table 3. Comparison of two groups of compliance [n (%)]

| Group | Number of cases | rash | Itching | Drug allergy | Hepatic and renal dysfunction | High blood pressure |
|-------------------|-----------------|----------|----------|--------------|-------------------------------|---------------------|
| Observation group | 39 | 1 (2.56) | 0 (0.00) | 1 (2.56) | 1 (2.56) | 0 (0.00) |
| Control group | 39 | 0 (0.00) | 1 (2.56) | 2 (5.13) | 0 (0.00) | 1 (2.56) |
| χ^2 | / | 1.582 | 0.691 | 1.126 | 0.984 | 1.326 |
| P | / | 0.593 | 0.748 | 0.621 | 0.559 | 0.339 |

4 Discussion

Sea lice injury is more common in Qinhuangdao City. Its venom contains proteinoids, peptides, serotonin, histamine, etc., which can cause local swelling, bleeding, and erythema. Some patients may cause shortness of breath, cold sweat and pain, etc. It will endanger the patient's life^[15, 16]. In recent years, the cypress splatter has been applied in the sea squid injury in Qinhuangdao City, and the effect is satisfactory. The study found that the onset of action, pain time, skin loss, swelling time and course of treatment in the observation group were shorter than the control group ($P<0.05$), indicating that the cypress splatter can be shortened for use in Qinhuangdao City. Symptom recovery time is conducive to patient recovery. The cypress sputum preparation is mainly composed of cork, scutellaria, borax and borneol. Among the prescriptions, Phellodendron has the functions of

clearing heat and dampness, clearing away heat and detoxifying; Astragalus membranaceus has the functions of qi, antiperspirant and pus discharge; borax has the effect of clearing away heat and eliminating phlegm; borneol has heat-clearing and detoxifying, all kinds of medicines play together, can play activating blood circulation, clearing away heat and detoxification efficacy. At the same time, the patient's clinical use of external application can fully exert the advantages of TCM external treatment^[18]. In this study, there was no statistically significant difference in the incidence of rash, itching, drug allergy, liver and kidney dysfunction, and elevated blood pressure between the observation group and the control group ($P>0.05$), indicating that the cypress splatter was used in Qinhuangdao City. The safety of drugs in sea lice is high, and the combination of the two treatment methods does not increase the incidence of adverse reactions.

After the sea lice, the venom can pass through the

blood throughout the body and cause the body to produce a stress response, thereby increasing the body's inflammatory factor expression level^[19]. TNF-a, IL-6 and IL-8 are important inflammatory factors in the human body. They are secreted and synthesized by mononuclear-macrophages and can directly participate in the regulation of immune and inflammatory responses. Clinical studies have shown that IL-6 is a sensitive medium in human body, has a variety of biological functions, can promote the occurrence of inflammatory factors, and can also play an anti-infective role. TNF-a and IL-6 are highly expressed in sea lice, which can cause tissue damage, and the expression level can reflect the severity of the disease. HIS and 5-HT expression are related to allergic reactions in the body, and can also affect many cellular reactions, including inflammation and allergic reactions. In normal humans, the expression levels of HIS and 5-HT are low, but in patients with sea lice, it can cause degranulation of mast cells and basophils, and can bind to target cell-specific receptors, causing local edema and infiltration. Out, severe cases can cause anaphylactic shock. Clinically, it can reduce the level of inflammatory factors in the sea blast injury of Qinhuangdao City, and can fundamentally control the development of the disease, help to quickly improve the symptoms of patients and promote the recovery of patients^[20]. In this study, the levels of inflammatory factors were lower than those before treatment ($P<0.05$). The levels of TNF-a, IL-6, HIS and 5-HT in the observation group were lower than those in the control group. ($P<0.05$), indicating that the cypress sputum can be used to reduce the level of inflammatory factors in patients with sea lice in Qinhuangdao City.

In summary, the use of cypress splatter in Qinhuangdao City can reduce the disappearance of symptoms, reduce the level of inflammatory factors, and increase the incidence of adverse drug reactions, which is worthy of popularization and application.

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