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# Observation of the Therapeutic Effect of Mongolian Medicine Sedeng-4 Nanoemulsion on 112 Cases of Pruritus Dermatosis

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**Abstract:** This electronic document is a “live” template. The various components of your paper [title, text, heads, etc.] are already defined on the style sheet, as illustrated by the portions given in this document. (Abstract) Purpose: To explore the treatment efficacy of Mongolian medicine Sedeng-4 Nanoemulsion on 112 Cases of Pruritus Dermatosis. Methods: 112 patients with pruritus dermatosis in dermatology were selected from May 2018 to June 2019. They are randomly divided into observation group and Dycloninae Hydrochloric Cream control group, Doxepine Hydrochloride Cream control group, of which 38 cases were observed, 37 cases were controlled against Dycloninae Hydrochloric Cream, 37 cases were in the control of Doxepine Hydrochloride cream. The effect of clinical treatment and the occurrence of adverse reactions were compared. Results: After 2 weeks of treatment, the symptoms of patients improved, and the differences between the three groups were not statistically significant (P>0.05); and the indicators of the observation group were significantly better than those of the other two control groups in the 4th to 8th week, with a total efficiency rate higher than that of the Dycloninae Hydrochloric Cream control group and the Doxepine Hydrochloride Cream control group. The differences in the three groups were statistically significant (P<0.05); the adverse reaction rates in the observation group were lower than those of the control group of Dycloninae Hydrochloric Cream and the control group of Doxepine Hydrochloride Cream (P<0.05). Conclusion: The clinical efficacy of Mongolian Medicine Sedeng-4 Nanoemulsion on 112 Cases of Pruritus Dermatosis is significant. With higher safety level and fewer cases of adverse reactions, it is worth popularizing in clinical practice.

**Keywords:** Mongolian medicine sedeng-4 nanoemulsion; Patients with pruritus dermatosis; Clinical efficacy; Adverse reaction

## 1. Introduction

Pruritus is a kind of dermatosis that is itchy only on skin and has no primary skin damage. Pruritus can cause itching in different parts of body, especially the face, and affect emotions and appearance of patients as well as have influences on their daily life and interpersonal interaction. Clinical treatment of pruritus dermatosis is tricky, so there is a growing focus on it. Targeted the patients with pruritus dermatosis as research objectives, this paper will discuss the treatment efficacy of Mongolian medicine Sedeng-4 Nanoemulsion on 112 cases of pruritus dermatosis. Report are as follows:

## 2. Medicine

Sedeng-4 Nanoemulsion was prepared and supplied by the Nano Teaching and Research Office of the Institute of Basic Medical Sciences of Inner Mongolia Medical University; Dycloninae Hydrochloric Cream is an external liniment; Doxepine Hydrochloride Cream was provided by Chongqing Huabang Pharmaceutical Co., Ltd.

## 3. Eligible Patients

There were 38 cases in the observation group, of which 25 were female and 13 were male; with an average age of 32.39±1.69 years; an average treatment course of 11.45 ±2.05 months. There are 37 cases in Dycloninae Hydrochloric Cream control group, of which 26 were female and 11 were male; average age was 33.80± 1.01 years; an average treatment course of 10.39±2.81 months.

There have 37 cases in Doxepine Hydrochloride Cream control group, of which 24 were female and 13 were male; an average age was 32.25±1.48 years; an average course of 11.18±2.82 months. Sex, age and the duration of disease were not statistically significant in the three groups of patients (P>0.05). Inclusion criteria: (1) determined by skin microscopic examination, physical examination, blood routine examination, etc.; (2) age 18-55 years, men and women are not limited; (3) no treatment history prior to 2 weeks of receiving treatment; (4) Patients volunteer to participate in this experiment and be able to comply with the protocol. Exclusion criteria (1) persons with severe allergies or allergic to the composition of the drug; (2) pregnant or suckling women; (3) patients with combined cardiovascular, liver and kidney, hematopoietic systems and other serious primary diseases and mental illness;

## 4. Test Method

### 4.1. Skin preparation

Wash face with warm water and non-pharmaceutical soap before using the drug.

### 4.2. Grouping

Selected from May 2018 to June 2019, 112 patients were treated with pruritus dermatosis in our department. They are randomly divided into observation group and Dycloninae Hydrochloric Cream control group, Doxepine Hydrochloride Cream control group, of which 38 cases were observed, 37 cases were controlled against Dycloninae Hydrochloric Cream, and 37 cases were controlled by Doxepine Hydrochloride Cream.

### 4.3. Medication

Control group: Dycloninae Hydrochloric Cream: after cleaning the injected part, Dycloninae Hydrochloric Cream should be applied; once in every morning and evening; 2 weeks for a treatment course; the duration period is 6 treatment courses.

Observation group: after cleaning the injected part, the drug was evenly applied to the damaged skin; applied 2 times a day; the duration of the treatment is 12 weeks. During treatment, three groups of patients are prohibited from using other external drugs or oral medication; after applying cream, it should be gently massaged to promote skin absorption of drug; urge patients to avoid scratching and spicy food is prohibited. The further consultation was judged on the 2nd, 4th, 8th and 12th weeks after using drug. The efficacy is examined according to the Nemodipine Method.

## 5. Results

### 5.1. Comparison of clinical efficacy in three groups

After 2 weeks of treatment, the symptoms of patients improved, and the differences between the three groups were not statistically significant (P>0.05); the indicators of the observation group were significantly better than those of the other two control groups in the 4th to 8th week, with a total efficiency higher than the Dycloninae Hydrochloric Cream control group, Doxepine Hydrochloride Cream control group, and the data differences among the three groups had statistically significant (P< 0.05), see Table 1.

**Table 1. Comparison of clinical efficacy between the three groups**

| | Treatment course(week) | Cases of recovery | Cases of marked effect | Cases of improvement | Cases of inefficacy | Total effective rate(%) |
|---|---|---|---|---|---|---|
| Observation Group | 2nd | 7 | 8 | 12 | 11 | 71.05 |
| | 4th | 9 | 13 | 6 | 10 | 73.68 |
| | 8th | 11 | 10 | 10 | 7 | 81.57 |
| | 12th | 14 | 12 | 7 | 5 | 94.29 |
| Dycloninae Hydrochloric Cream control group | 2nd | 6 | 5 | 9 | 14 | 62.16 |
| | 4th | 6 | 8 | 14 | 12 | 67.56 |
| | 8th | 8 | 10 | 10 | 9 | 75.68 |
| | 12th | 10 | 8 | 11 | 8 | 78.37 |
| Doxepine Hydrochloride Cream control group | 2nd | 5 | 6 | 8 | 15 | 59.46 |
| | 4th | 6 | 7 | 10 | 14 | 62.16 |
| | 8th | 8 | 6 | 10 | 13 | 64.86 |
| | 12th | 10 | 8 | 9 | 10 | 72.97 |

### 5.2. Comparison of adverse reactions

The adverse reaction rate in the observation group was lower than that of the Dycloninae Hydrochloric Cream control group and the Doxepine Hydrochloride Cream control group (P<0.05), as shown in Table 2.

**Table 2 .Comparison of adverse effect condition [n(%)]**

| Groups | Aggravated Facial Pruritus | Burning Sensation | Erythema | Adverse Reaction Rate |
|---|---|---|---|---|
| Observation Group | 1(2.63) | 0(0.00) | 0(0.00) | 1(2.63) |

| | | | | |
|---|---|---|---|---|
| Dycloninae Hydrochloric Cream control group | 2(5.41) | 1(2.70) | 0(0.00) | 3(8.11) |
| Doxepine Hydrochloride Cream control group | 0(0.00) | 2(5.41) | 2(5.41) | 4(40.81) |
| F | 5.283 | 6.569 | 6.589 | 6.425 |
| P | 0.000 | 0.000 | 0.000 | 0.000 |

## 6. Discussion

Mongolian Medicine Sendeng -4 Nanoemulsion decoction is recorded in The Joy of the Viewer. It is composed of lignum xanthocerais sorbifoliae, terminalia chebula Retz, meliatoosendan, cape jasmine, which are grinded into fine powder and make decoction. Sendeng -4 decoction has the function of clearing heat, swelling, curing damp-heat disease. It mainly cures gout, paralysis, joint damp-heat disease and edema, which is an anti-rheumatic classic prescription. It has effect on skin, such as anti-inflammatory antibacterial, convergent satoin, moisturizing itching, etc.; it also can effectively suppress aphids and a variety of skin microorganisms (bacteria and fungi); balancing skin oil secretion; blood circulation; repair damaged cells, soothe skin erythema and soft skin. This subscription is recorded by the Criterion of Mongolian Medicine and the Drug Criterion of Ministry of Health·Mongolian Medicine Fascicule.

In recent years, the Mongolian Medicine Sedeng-4 Nanoemulsion has been used in patients with pruritus dermatosis, and the effect is ideal. In this study, after 2 weeks of treatment, the symptoms of patients were improved, and the difference between the three groups was not statistically significant (P>0.05); the indicators of the observation group from 4th to 8th week were significantly better than those of the other two groups of control groups, and the total efficiency rate was higher than that of Dycloninae Hydrochloric Cream control group and Doxepine Hydrochloride Cream control group. The three sets of data were statistically significant (P <0.05), indicating that the application of the Mongolian medicine Sedeng-4 Nanoemulsion on pruritus dermatosis had significant effect. In this study, the adverse reaction rate of the observation group was lower than that of Dycloninae Hydrochloric Cream control group and Doxepine Hydrochloride Cream control group (P<0.05), which showed that side effects of the Sedeng-4 Nanoemulsion were less. Nanoemulsion, also known as micromulsion, is a new drug carrier developed in recent years, consisting of oil phase, water phase, surfactants and assistants of surfactants in accordance with a certain proportion, with a particle size of 1-100nm of thermodynamic stability, isotropy, presenting a transparent or translucent homogenization system. Under certain conditions it can spontaneously form a uniform size of milk droplets, and can be thermally sterilized, or centrifugal non-layered dispersion system. Since the 1980s, nanoemulsion theory and appliance of research has developed rapidly. Nanoemulsion as a new drug carrier has many advantages: to increase skin kerato layer lipid bimolecular layer fluidity, to increase drug solubility and improve the permeability concentration gradient, to increase the amount of drug permeation and so make skin wet; improve the medical stability and bioavailability; with outstanding slow release and targeted action; by improving the organization's tolerance to drugs and drug absorption and transport, it will not produce rejection reaction; the process is simple, the preparation process does not require special equipment, etc., which overcome the shortcomings of traditional dosage forms, so nanoemulsion as a drug carrier has been widely concerned.

In summary, the treatment efficacy of Mongolian medicine Sedeng-4 Nanoemulsion on pruritus dermatosis is significant. With higher safety level and fewer cases of adverse reactions, it is worth popularizing in clinical practice.

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