

Patients with severe drug eruption analysis of clinical characteristics and nursing effect

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Abstract: To explore the clinical characteristics and nursing strategies of patients with severe drug eruption. A total of 50 patients with severe drug eruption diagnosed in our hospital from 2020 to 2024 were selected. The clinical characteristics and nursing effects of patients with severe drug eruption were studied through medical records, laboratory examinations and comprehensive nursing intervention. Among the 50 patients, 38 (76.00%) were male and 12 (24.00%) were female. The age of onset ranged from 9 months to 84 years, with an average of (46.31 ± 23.22) years. The body weight ranged from 11 to 100(59.03 ± 17.85) kg. Seven patients (14.00%) had a history of drug allergy. The age of onset was mostly between 20 and 60 years old, and most of them were male. The most common clinical manifestation of severe drug eruption was mucosal involvement, followed by fever and pruritus. The most common type with mucosal involvement was SJS, followed by TEN, and the least common type with mucosal involvement was AGEP. The most common type of fever was AGEP. The most common symptom associated with pruritus was TEN. After clinical comprehensive nursing intervention, there were 37 effective patients (74.00%) and only 2 ineffective patients (4.00%), and the treatment effect was good. Severe drug eruption can happen at any age, the incubation period, the clinical symptoms except desquamation, bulla and many parts of mucosal involvement, also may be accompanied by high fever, viscera function damage, etc., come on urgent, case fatality rate is high, once has the symptoms, should be timely withdrawal, positive system integrated nursing treatment, effectively relieve symptoms, promote disease recovery.

1. Introduction

Drug eruption is one of the types of adverse drug reactions, which refers to the inflammatory reaction of skin and mucosa caused by drugs entering the human body through oral administration, injection, inhalation and other ways. Severe drug eruption is severe skin adverse drug reactions, besides the skin mucous membrane damage, involving multiple organ systems, such as Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), exfoliative dermatitis (ED), acute generalized epidemic pustulosis (AGEP), drug hypersensitivity syndrome (DHS), have high disability and mortality rates, among which SJS and TEN It is more likely to involve the mucosa, resulting in epidermal exfoliation and erosion, and secondary serious infection, which seriously threatens the life and health of patients ^[1]. Understanding the common allergens, clinical

characteristics and nursing strategies of severe drug eruption in local area can help clinicians to monitor and prevent severe drug eruption early, avoid drug abuse, and reduce the incidence and mortality of drug eruption. Is treated in this hospital from 2020 to 2024 of the clinical data of patients with severe drug eruption were analyzed retrospectively, so as to provide reference for clinical diagnosis and treatment.

2. Objects and Methods

2.1 Subjects

Through the electronic medical record system combined with the adverse reaction reporting system, 50 patients with severe drug eruption diagnosed in our hospital from 2020 to 2024 were selected TEN19 SJS15 cases (30.00%) cases (38.00%), ED8 cases (16.00%), AGEP6 cases (12.00%). DHS2 cases (4.00%).

2.2 Diagnostic criteria and criteria for adverse drug reactions

The diagnostic criteria and classification were referred to "Dermatology and Venereology" [2]. The patient's gender, age, weight, allergy history, allergenic drugs, disease incubation period, fever peak, mucosal involvement, treatment and outcome were collected, and the clinical characteristics of patients with different disease types were analyzed.

2.3 Laboratory tests

All patients underwent routine blood and urine examination, procalcitonin, wound bacterial culture, liver and kidney function, erythrocyte sedimentation rate, myocardial enzymes, and chest X-ray. Some patients underwent B-ultrasound, CT and other examinations.

2.4 Nursing methods

2.4.1 Psychological care

Severe drug eruption type epidermolysis drug eruption in particular, due to the onset nasty, illness development is rapid, stripped of skin mucous membrane, cheap bad cause pain, psychology is full of pain, fear, anxiety and disappointed. In the face of such an unexpected disaster, patients are psychologically and physically unbearable. Some patients could not tolerate it and could not cooperate well with the treatment. Therefore, we should strengthen psychological counseling, care, comfort and encourage patients, patiently and carefully do ideological work, introduce successful cases, inspire patients to overcome the disease confidence and courage, actively cooperate with treatment, and strive for an early recovery.

2.4.2 Environmental care

Patients with severe drug eruption should be placed in a small number of people, preferably a single room. The temperature of the ward is appropriate (temperature 20-28°C, humidity 50%-60%). When entering the ward, you should wash your hands, wear a mask, and disinfect with ultraviolet rays twice a day for 1 hour each time. The floor and nightstand were disinfected with hypochlorous acid 500mg L twice a day. Sheets, quilt covers and pillowcases were sterilized and used to reduce secondary infection and cross infection.

2.4.3 Skin care

The skin lesions with red swelling and exudation should be treated with 3% acid solution or 0.1% revnull cold wet compress multiple times a day to reduce the exudation and shorten the wet compress time. For the rough and rotten surface of the drug eruption of bulla epidermolysis, it is better to keep the wound dry, and the necrotic epidermis should be removed by changing the dressing every day. When there were many secretions, the patients were treated with dressing change twice a day and exposed to infrared light with suitable temperature, twice a day, 20-30 minutes each time. To prevent skin adhesion, disinfection protection is available, in case of bedding paste skin avulsion. For venipuncture, do not apply the tourniquet directly to the skin lesion to cause pain and tear the skin.

2.4.4 Nursing of hormone application

The death rate of severe drug eruption has decreased obviously in recent years due to the application of hormone. The severity of the disease is related to the early and appropriate use of hormone and active rescue. A decrease in skin lesions is an indication for hormonal adjustment. After the dose of glucocorticoid was reduced, attention should be paid to the rebound phenomenon of skin lesions, that is, skin lesions were aggravated again. Blood pressure, blood glucose, blood potassium, and blood calcium were also observed. And liver function, etc.

2.4.5 Nursing of five senses mucosa and perineum ^[3]

Severe drugs can cause mucosal damage of oral cavity, eyes, nasal cavity and perineum, forming magrophic ulcer, causing inability to eat, nasal obstruction, inability to open and close eyes, small make tingling, etc., so mucosal care is very important. Such patients with serious ulceration of oral mucosa, mouth is prone to bleeding, adhesion: special attention should be paid to oral and nasal care, two times a day to clean the mouth, before and after meals, mouth Tai stimulation mouth or 2% boric acid water garnish, in order to achieve the purpose of sterilization, clean the mouth. During the day, antibiotic eye drops and hydrocortisone eye drops were applied alternately for 92h. Nasal scabbed with saline cotton swab repeatedly gently moist, coated with a little paraffin oil, to soften the skin, and then with a cup to gently remove the skin, and then with 3% acid cotton ball wet compress, 10 minutes later apply chlormycin eye ointment.

For the perineum, after each defecation and urination, help the patient wash the perineum with warm water or clean the perineum with 0.1% rifnol to keep the perineum clean and hygienic.

2.4.6 Nutritional support

Due to high fever and exfoliation and exudation of large areas of skin, plasma protein is often reduced, dehydration and electrolyte disorder, which should be corrected in time. The diet was given high protein, high vitamin, easy digestion, no stimulation of flow juice, half flow juice.

3. The results

3.1 Clinical features

Among the 50 patients, 38 (76.00%) were male and 12 (24.00%) were female. The age of onset ranged from 9 months to 84 years, with an average of (46.31 ± 23.22) years. The body weight ranged from 11 to 100(59.03 ± 17.85)kg. The most common clinical manifestations of severe drug eruption of mucosal involvement, followed by fever and itching. The most common type with

mucosal involvement was SJS, followed by TEN, and the least common type with mucosal involvement was AGEP. The most common type of fever was AGEP. The most common symptom associated with pruritus was TEN. See Table 1 for details.

Table 1: Gender, age and clinical manifestations of patients with different types of severe drug eruptions (cases)

Group of groups		SJS	TEN	ED	AGEP	DHS
n		15	19	8	6	2
Men	<20	2(13.33)	2(10.53)	2(25.00)	0(0.00)	1(50.00)
	20-60	7(46.67)	5(26.32)	3(37.5)	3(50.00)	0(0.00)
	>60	1(6.67)	5(26.32)	1(12.5)	0(0.00)	0(0.00)
Women	<20	0(0.00)	0(0.00)	1(12.5)	1(16.67)	0(0.00)
	20-60	4(26.66)	4(21.05)	0(0.00)	1(16.67)	1(50.0)
	>60	1(6.67)	3(15.79)	1(12.5)	1(16.67)	0(0.00)
Itching		10(66.67)	15(78.95)	2(25.00)	4(66.67)	1(50.0)
Fever		3(20.00)	11(57.89)	5(62.5)	2(33.33)	0(0.00)
Mucosal involvement		2(13.33)	3(15.79)	3(37.5)	2(33.33)	0(0.00)
Respiratory symptoms		0(0.00)	0(0.00)	1(12.5)	1(16.67)	1(50.0)
The digestive system symptoms		1(6.67)	1(5.26)	2(25.00)	0(0.00)	0(0.00)
Urinary tract symptoms		1(6.67)	0(0.00)	1(12.5)	0(0.00)	0(0.00)

3.2 The nursing effect

50 cases in clinical, after comprehensive nursing intervention in patients with total effective 37 cases (74.00%), invalid only 2 cases (4.00%) patients, treatment effect is good. See Table 2 below for details.

Table 2: Nursing effects of different types and different types of severe drug eruption patients

Group of groups	n	cure	effective	Void of effect	Total effective rate
SJS	15	10	4	1	14
TEN	19	16	3	0	19
ED	8	6	2	0	8
AGEP	6	4	1	1	5
DHS	2	1	1	0	2
Total	50	37	11	2	48

4. Discussion

Drug eruption is dermatological department common disease, severe drug eruption is rare in clinic, accounted for 5% of all patients with drug eruption. Patients with typical clinical symptoms for the skin swelling, desquamation, bulla, skin involvement or more mucous membrane peeling, accompanied by high fever, viscera function damage, etc., come on urgent, case fatality rate is high,

its pathogenesis is not fully clear at present, more thought to have formed cutin cell apoptosis, make the skin mucosa damage, mediated by the immune system of tumor necrosis factor, Fas/FasL, Cytokines, cytotoxic T cells, CD8⁺ T cells through the release of perforin and particle enzyme, make the organization cell apoptosis, dermis and epidermis separation, skin necrosis, so as to induce severe drug eruption^[4-5]. Severe drug eruption can occur at any age. The age of onset of patients in this study was mostly 20-60 years old, and the gender was mostly male. It is different from the conclusion that severe drug eruption is more common in women, which may be related to the small number of clinical cases enrolled.

SJS is the most common type of severe drug eruption. SJS is usually combined with erosion of oral, ocular and genital mucosa. This study showed that the most common clinical symptom of SJS was mucosal involvement, and the first eruption site of some patients was oral mucosa, which was consistent with the report in the literature^[6]. The second was TEN, which was the most dangerous type. In addition to the common symptoms such as mucosal involvement, fever and pruritus, liver function damage was also common. In severe drug eruption, most of the patients were accompanied by an increase in the total number of white blood cells, 67% of the patients had positive wound bacterial culture (the most common bacteria was *Staphylococcus aureus*), and some patients had elevated procalcitonin, accompanied by pulmonary infection and fever. These examination results and accompanying symptoms showed that severe drug eruption was often accompanied by infection. This may be related to severe drug eruption is often associated with burst and erosion of skin mucous membrane, easy cause local infection or primary disease. There are patients with myocardial enzyme levels, liver function abnormalities, elevated serum creatinine values or respiratory system infection, TEN of these patients were the most common wound bacterial culture positive, impaired kidney or liver damage, prompt and may be related to poor prognosis. That can be complicated with wound infection in severe drug eruption, pulmonary infection, liver, kidney and heart damage. Therefore, in the treatment process, we should actively prevent and anti-infection, protect the liver, kidney and heart, prevent and treat the failure of various organs, and reduce the mortality.

Research indicates that the most common antibiotics for severe drug eruption sensitization drugs, this may be related to the kinds of antibiotics, more widely used, there are many antibiotics at the same time share a certain relationship. Some drugs such as allopurinol, carbamazepine, there is A clear genetic factors caused by severe drug eruption, literature^[7] reported its pathogenesis and HLA - B * 1502, HLA - A * 3101 and HLA - B * 5801 genetic susceptibility. Therefore, it is necessary to screen the susceptible population and reduce the incidence of drug eruptions before the use of these drugs in areas with conditions. Pharmaceutical care and medication education should be strengthened for patients, especially those with a history of drug allergy, to reduce the incidence of drug eruption as far as possible.

In care, once diagnosed, should immediately stop using sensitization drugs and suspicious sensitization, group 1 patients don't follow the doctor's advice, the original sensitization drugs without authorization carbamazepine, became seriously ill, and after active treatment, save the day. Except for a part of patients with AGEP, all patients can be treated with adequate hormone in the early stage. Positive correct hypoalbuminemia and electrolyte disorders, prevention and control of skin and pulmonary infection, liver function is unusual for the drug that protect liver, and pay attention to other viscera function. Routine treatment and symptomatic treatment effect is not obvious, together with all the ball eggs self and plasma exchange of hormone treatment, improve curative effect. IVIG can inhibit the production of autoantibodies through the idiotypic network, bind to the activated complement, and prevent its binding to target cells, thereby avoiding tissue damage and destruction and improving the patient's resistance to infection. Combined with glucocorticoid or plasma exchange can help to reduce the complications and mortality of severe

drug eruption. After clinical comprehensive nursing intervention, 37 patients (74.00%) were effective and only 2 patients (4.00%) were ineffective. The treatment effect was good.

In summary, severe drug eruption can occur at any age, with indefinite incubation period. In addition to desquamation, bullae and multiple mucosal involvement, it can also be accompanied by high fever and organ function damage, with acute onset and high mortality. Once there are symptoms, it is necessary to stop the drug in time, actively carry out systematic and comprehensive nursing treatment, effectively reduce the patient's symptoms and promote the recovery of the disease.

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