

## The Two Cases of Adult Generalized Erythema Nodosa

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**Keywords:** Erythema Nodosa; Generalized

**Abstract:** Erythema nodosa is a common clinical disease, which is an inflammatory disease that mainly affects subcutaneous fat tissue, and it occurs in young and middle-aged women [1]. Clinical studies believe that [2], the etiology of erythema nodosa is complicated, such as infection, drugs, estrogen and other diseases, and it is clinically manifested as red or purple painful nodules. Previous studies have shown that the etiology of erythema nodosa is complicated, and common causes include: streptococcal infection, tuberculosis infection, drugs, delayed allergy, etc. (1) Streptococcal infection. Some patients may occur after respiratory infection, angina and acute tonsillitis [3]; (2) tuberculosis infection. More and more studies believe that erythema nodosa is closely related to tuberculosis infection. For patients with a positive result of the calcineurin test, the incidence of erythema nodosa is more than 60.0%, which is the body's allergy to tuberculosis or its toxin; (3) drugs. For long-term use of bromine agents, sulfa drugs and oral contraceptives, the incidence of erythema nodosa is higher [4]. (4) Delayed allergy. Skin allergies are caused by a variety of reasons, but the specific pathogenesis has not been clarified clinically [5]. Generalized erythema nodosa is rarely reported in clinical practice. 2 cases of generalized erythema nodosa treated in our department are reported as follows.

### 1. Case Data

Case 1 Female patient, 52 years old. The main cause was erythema nodules on the face and limbs with pain for 3 days to visit our department. The patient reported 3 days ago that there was no obvious cause of erythema and nodules on the face and limbs, and obvious pain in the skin lesions, accompanied by pain in both knee joints. Then went to see a doctor. Follow-up medical history, previous physical fitness, no history of internal and external medications 1 month before the onset and since the onset. Physical examination: Pharyngeal hyperemia was obvious, and there were no abnormalities. Dermatology (Figures 1 to 4): The face, left eyelid, and limbs are scattered with purple-red nodules, broad beans to plum size, limb rashes are roughly symmetrical, with more extended sides, slightly higher than the skin, high skin temperature, obvious tenderness, The erythema nodules in the palms of the hands are arranged linearly. Laboratory examination: blood routine was normal, erythrocyte sedimentation rate 73mm/h, tuberculin test was negative, anti-"O" and rheumatoid factor were all within the normal range, antinuclear antibody was negative, syphilis serological test was negative, and chest radiographs were normal. Pathological examination of the skin lesions (Figures 5-8): edema in the upper dermis, inflammatory infiltration around blood

vessels, infiltration of inflammatory cells in the middle and lower dermis and upper subcutaneous tissue, non-specific acute inflammatory changes, fatty septal panniculitis, Miescher node Section. Clinical and histopathological diagnosis was generalized erythema nodosa. Give oral nabumetone capsule 0.5g, 2 times/d, prednisone tablet 30mg, 1 time/d, intravenous infusion of compound glycyrrhizic anhydride powder injection 60mg, 1 time/d, safflower injection 20ml, 1 time/d . After 1 week, the skin lesions completely subsided and there was no pain.

This case is characterized by generalized erythema nodosa at the initial onset, with a large number of rashes extending to the face and limbs, accompanied by pain in the knee joints, and the erythema nodules in the intermuscular area of the palms of the hands are linearly arranged. After 1 week of anti-inflammatory and blood circulation treatment, the rash subsided, the symptoms disappeared, the treatment course was short, and the recovery was quick.



**Figure 1.** Facial lesions in patients with generalized erythema nodosa



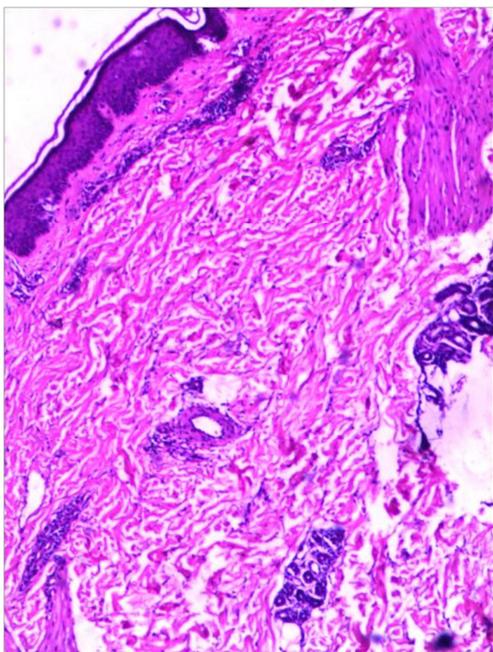
**Figure 2.** Generalized erythema nodosa skin lesions on limbs



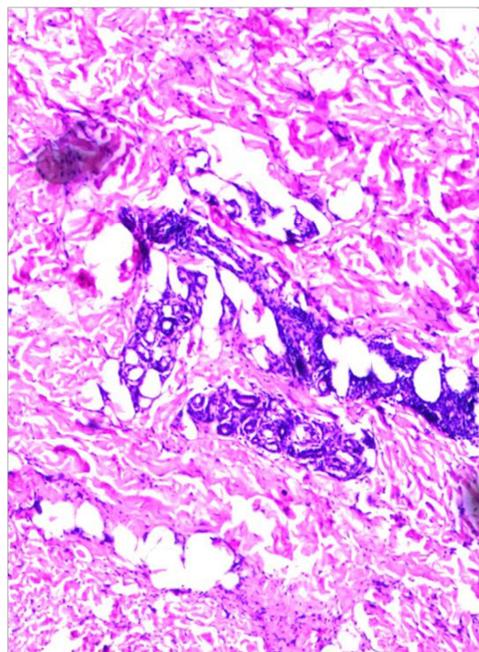
**Figure 3.** Skin lesions of both lower limbs of patients with generalized erythema nodosa



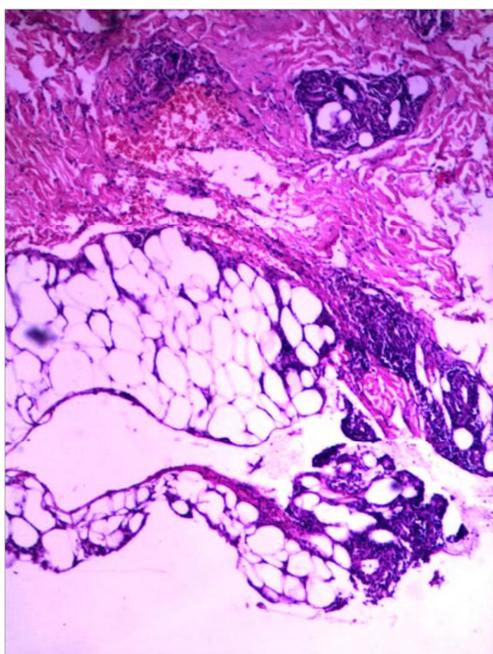
**Figure 4.** Upper limb skin lesions in patients with generalized erythema nodosa



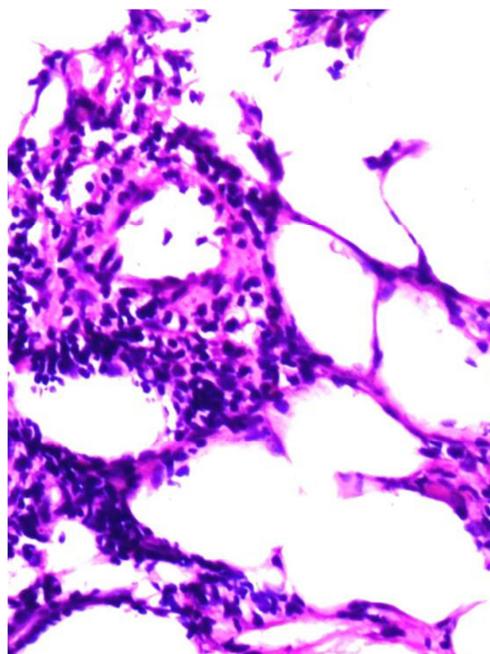
**Figure 5.** Histopathology of generalized erythema nodosa (HE×40)



**Figure 6.** Histopathology of generalized erythema nodosa (HE×40)



**Figure 7.** Histopathology of generalized erythema nodosa (HE×40)



**Figure 8.** Histopathology of generalized erythema nodosa (HE×40)

Case 2: A 43-year-old female patient came to our department for treatment due to erythema nodules in extremities with pain for 1 week. The patient complained of subcutaneous nodules of different sizes with pain in the limbs after exertion 1 week ago, soreness of the limbs, no fever, normal diet and two stools, previous physical fitness, and no similar medical history in the family. The physical examination was normal. Dermatology situation (Figure 9-11): There are more than 30 red subcutaneous nodules scattered on both sides of the upper limbs and both sides of the lower limbs from broad beans to the size of a thumb. Most of them are stretched by the calf and stretched for the forearm, slightly higher than the skin surface, and the skin is tight, Local skin temperature is high, tenderness is obvious. Laboratory examination: blood, urine, and erythrocyte sedimentation rate were all normal. Antinuclear antibodies are negative. Pathological examination of the skin lesions (Figure 12-14): Pathological manifestations of septal panniculitis. The clinical

manifestations combined with histopathology were diagnosed as generalized erythema nodosa. Give oral compound glycyrrhizic anhydride capsules 75mg, 3 times/d, nimesulide dispersible tablets 1 tablet, 1 time/d, and prednisone tablets 20mg, 1 time/d. After 1 week, no new skin lesions appeared, the original skin lesions became flat, the color became pale, and the pain was relieved. After 3 weeks, the original skin lesions completely subsided and the pain disappeared.

This case was characterized by erythema nodules in the limbs after fatigue, no joint pain, and obvious soreness in the limbs after the onset. After 3 weeks of anti-inflammatory treatment, he recovered, the treatment course was longer and the recovery was slow.



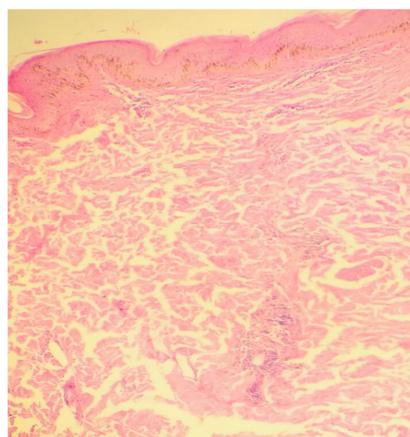
**Figure 9.** Skin lesions of limbs in patients with generalized erythema nodosa



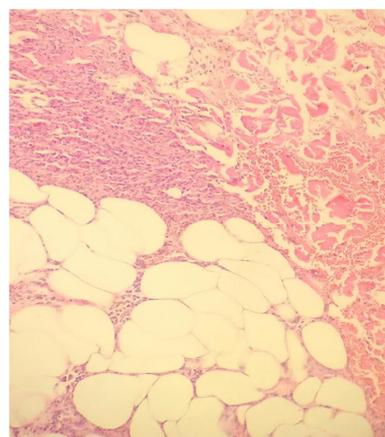
**Figure 10.** The skin lesions of both lower limbs of patients with generalized erythema nodosa



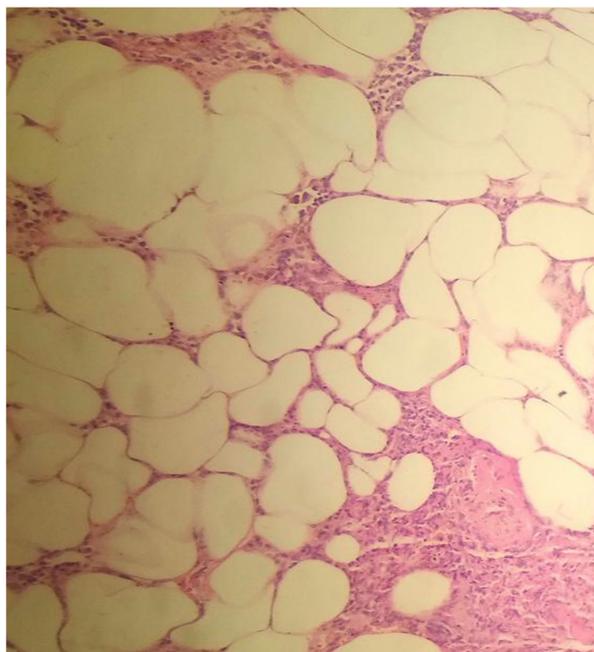
**Figure 11.** Upper limb skin lesions in patients with generalized erythema nodosa



**Figure 12.** Histopathology of generalized erythema nodosa (HE×40)



**Figure 13.** Histopathology of generalized erythema nodosa (HE×40)



**Figure 14.** Histopathology of generalized erythema nodosa (HE×40)

## 2. Discussion

Erythema nodosa is a common inflammatory panniculitis in dermatology. It is more common in young and middle-aged women, and it is more common in spring and autumn. The clinical manifestations are subcutaneous erythema nodules with obvious pain. There are many causes, mainly related to infections, drugs, estrogen, autoimmune diseases, sarcoidosis, inflammatory bowel disease, Behcet's disease, malignant tumors, etc. [6]. There is a history of upper respiratory tract infections, and the skin lesions are mostly located on the extended sides of both calves, symmetrically distributed. This patient involves the thigh, upper limbs, and face, which is rare. This disease needs to be distinguished from hard erythema and recurrent febrile nodular panniculitis: the disease nodules are bright red, located on the extension side of the calf, do not purulent, do not rupture, do not leave scars, acute course, short course of disease, and pathological interval Panniculitis changes, and local skin does not sink after the skin lesions subsided. Hard erythema nodules are purple-red, located on the flexed side of the calf, soften, ulcerate, form ulcers, scars, slow onset, long course, pathological changes of tuberculosis-like infiltration and vasculitis. Recurrent febrile panniculitis occurs in young and middle-aged women. Subcutaneous nodules are formed in whole groups. The nodules are painful and have systemic symptoms such as fever. After the nodules subside, the local skin is sunken. Pathological examination is a commonly used examination method for patients with erythema nodosa, and the main pathological changes of patients occur in the subcutaneous fat lobule interval. In the early stage of acute inflammatory reaction, neutrophil infiltration is mainly accompanied by extravasation of a small amount of lymphocytes, eosinophils and a small amount of red blood cells. As the patient's condition continues to develop, neutrophils will disappear, and replaced by lymphocytes, plasma cells and tissue cells infiltrated. In the fat lobule interval, some patients may have giant cell and granuloma changes, and the blood vessels and fat lobules are not damaged [7]. In this study, the two groups of patients with erythema nodosa were diagnosed by pathological examination, which can provide basis and reference for clinical treatment.

At present, the clinical treatment of erythema nodosa is dominated by drugs. Commonly used drugs include: compound glycyrrhizic anhydride capsules, nimesulide dispersible tablets, and prednisone tablets, all of which can achieve good therapeutic effects. Compound glycyrrhizic anhydride capsules are used for the treatment of chronic liver disease, which helps to improve liver function abnormalities. It can also be used for the treatment of diseases such as eczema, dermatitis

and alopecia areata. Modern pharmacological results show that [8]: Compound Glycyrrhizic Anhydride Capsules can exert anti-inflammatory, anti-allergic, blocking effects on arachidonic acid metabolism enzymes, and exert a good immunomodulatory effect in patients with erythema nodosum. The compound glycyrrhizic anhydride capsule can exert a good immunosuppressive effect in clinical use, enhance the inhibitory response of hormones, and can selectively hinder the phosphorylation of the above enzymes and inhibit their activation. In addition, the drug can regulate the activation of T cells, NK cells, and promote the differentiation of T cells outside the thymus. Good results can be obtained. When used in patients with erythema nodosum, it can quickly improve the symptoms of patients and obtain a good treatment prognosis. Nimesulide dispersible tablets are suitable for patients with rheumatoid arthritis and osteoarthritis. It is a non-steroidal drug that can exert anti-inflammatory, analgesic and antipyretic effects. However, the clinical pharmacological mechanism of Nimesulide dispersible tablets has not been fully elucidated. It can inhibit the synthesis of prostaglandins and the release of interleukins in patients with erythema nodosum, which is also related to the oxidation reaction of polymorphonuclear leukocytes. Modern pharmacological results show that [9]: Nimesulide dispersible tablets are mainly used for oral medication in clinical use, the maximum blood concentration can be reached 1-2h after the medication, and the half-life of the drug is 2-3h, and the effect can be sustained at 6-8h. It avoids the accumulation of drugs in the body after repeated use of the patient. Prednisone tablets are adrenal glucocorticoids, which can play an anti-inflammatory and prevent sequelae of certain inflammations in clinical use, and can also be used for the treatment of autoimmune diseases and allergic diseases. Modern pharmacological results show that [10]: Prednisone tablets can be used for serious infections in the body, can also be used for rheumatic fever, rheumatoid arthritis and systemic lupus erythematosus and other diseases, and can also be used for local rash patients. The prognosis of treatment. Clinically, the combined use of compound glycyrrhizic anhydride capsules, nimesulide dispersible tablets, and prednisone tablets in patients with erythema nodosum can exert the advantages of different drugs, help improve the symptoms of patients, and help patients recover. In this study, 2 patients with confirmed erythema nodosum were treated with compound glycyrrhizic anhydride capsules, nimesulide dispersible tablets, and prednisone tablets to obtain a good prognosis, and the symptoms of the patients were improved, which was beneficial to the recovery of the patients.

### 3. Conclusion

Erythema nodosa is an acute inflammatory disease involving subcutaneous fat tissue. After admission, the patient's relevant examinations should be perfected to assess the patient's physical condition; for confirmed patients, drug intervention should be given in time, and the treatment should be strengthened. Patient vital signs monitoring to promote early recovery of patients.

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