Erythema nodosum

Summary

- Erythema nodosum is a skin condition characterised by red and tender lumps, most commonly on the shins.
- The characteristic lumps are collections of immune cells clustered in pockets within the subcutaneous (deepest) layer of the skin.
- Known triggers of erythema nodosum include certain drugs and bacterial throat infections. Less common causes include inflammatory bowel disease (IBD), tuberculosis and Hodgkin’s disease. Treatments include medications, bed rest and treatment for any underlying condition.

Erythema nodosum appear as red tender lumps, most commonly on the shins or lower legs. The condition is three times more common in women than men, and tends to develop somewhere between 20 and 45 years of age. Children under the age of 15 years are very rarely affected.

The specific cause of erythema nodosum is unknown, but the condition can be triggered by certain drugs, diseases and infections. The trigger remains unknown in many cases. Even with treatment, the inflamed nodules can take around three to six weeks to resolve.

Symptoms of erythema nodosum

The symptoms include:

- The skin on the shins is most commonly affected.
- Other areas that may be affected include the ankles, calves, thighs, buttocks and arms.
- Raised red, hard, hot and painful lumps appear on the skin.
- The lumps can be from 1 cm to 20 cm wide.
- Up to 50 lumps may develop in the affected area.
- Legs may swell.
- Fever and general malaise may occur.
- Around half of all cases are associated with joint pains, particularly the knees.
- Conjunctivitis sometimes develops.
- The lumps turn from bright cherry red to purple over a few days.
- The purple lumps become brownish-yellow and flat over a few weeks.
- The lumps tend to recur if the person doesn’t have sufficient rest.

Erythema nodosum - immune cells

The skin consists of three main layers, being the epidermis, the dermis and the subcutaneous layer. The subcutaneous layer is the deepest, and provides support and structure for the overlying dermis and epidermis.

Erythema nodosum is an immunological response. The characteristic lumps are collections of immune cells clustered in pockets within the subcutaneous layer. In some cases, the dermis (middle layer of the skin) may also be affected.

Causes of erythema nodosum

The exact cause of erythema nodosum is unknown, but some cases may be linked to or triggered by a range of infections and other factors, including:

- throat infections, usually bacterial
- involvement of the lymph nodes in sarcoidosis
- tuberculosis
- Hodgkin's disease
- hormonal changes, such as pregnancy and the use of birth control pills
- certain drugs, including penicillin, bromides and sulphonamides
- inflammatory bowel disease (IBD)
- other infections, including psittacosis, infectious mononucleosis (EBV or 'glandular fever'), hepatitis B and syphilis.

The trigger is unknown in around 20 per cent of cases.

**Diagnosis of erythema nodosum**

Erythema nodosum can be confused with other skin conditions, such as vasculitis or necrobiosis lipoidica. It needs to be carefully diagnosed and further tests may be used to identify the cause.

These may include:
- medical history
- physical examination
- biopsy of the subcutaneous tissue
- throat swab
- blood tests
- chest x-rays
- specific tests for other known triggers such as tuberculosis.

**Treatment for erythema nodosum**

Treatment depends on the underlying cause, but may include:
- bed rest to relieve pressure and reduce swelling
- support stockings or bandages
- the use of alternating hot and cold compresses to ease pain
- non-steroidal anti-inflammatory medications (NSAIDs)
- corticosteroids to reduce inflammation
- treatment of the underlying cause – for example, treating the infection or changing the treatment if medications are the cause
- other medications have been reported to be useful, including dapsone, colchicine, hydroxychloroquine and erythromycin.

**Where to get help**

- Your doctor
- Dermatologist
- The **Australasian College of Dermatologists** Tel. (02) 8765 0242