What is cellulitis?

■ Cellulitis is a diffuse, acute infection of the skin and subcutaneous tissue.
■ It is caused by some anaerobic microbes or by Streptococcus pyogenes or Clostridium perfringens.
■ The spread of infection is aided by the formation of enzymes that break down connective tissues – which normally isolate areas of inflammation.
■ In adults, cellulitis presents most commonly in the lower limbs.

Risk factors

Older people are particularly at risk of cellulitis. It is more likely to develop in the presence of:
■ Damaged skin;
■ Poor circulation;
■ Diabetes mellitus;
■ Chronic lymphoedema of the leg;
■ Obesity;
■ Previous leg ulcer;
■ An obvious portal of entry such as a surgical lesion, leg ulcer, minor abrasion, stasis eczema or intravenous drug injection site.

Signs and symptoms

■ Localised heat.
■ Redness.
■ Smooth shiny skin – crusting and scaling tends to be seen only in varicose eczema.
■ Pain.
■ Swelling.
■ Occasionally: fever; malaise; chills; headache; raised white cell count.
■ If untreated, the products of inflammation may enter the blood causing septicaemia.
■ In severe cases necrotising fasciitis may occur.

Cellulitis in the leg spreads to affect the lymph nodes in the groin, which can become enlarged, tender and easily palpable on examination.

Diagnosis and tests

■ Clinical examination.

Treatment and therapies

■ Intravenous or oral antibiotics – usually benzylpenicillin/flucloxacillin – abscess and tissue destruction can occur if appropriate antibiotics are not administered.
■ Prophylactic tinzaparin if there is a risk of deep vein thrombosis.
■ Elevation of the affected area.
■ Prevention of pressure to the affected area.
■ Patients with recurrent cellulitis may be prescribed prophylactic antibiotics.

Nursing implications

■ Bed rest is necessary – passive exercise can reduce the associated complications.
■ Limb elevation is important to reduce oedema.
■ Pressure area care.
■ Patient education once the condition has resolved. Advise on: basic skin care and avoidance of predisposing factors where possible; avoidance of skin damage by wearing appropriate protective equipment when taking part in work or sport; cleaning any skin breaks carefully and monitoring for signs of infection; and good general health in fighting potential infection.

Research and development

■ The British Medical Journal’s clinical evidence website looks at the effects of antibiotics and the effects of treatment of predisposing factors to prevent recurrence.

Websites

British Medical Journal clinical evidence site: www.clinicalevidence.com
NHS Direct www.nhsdirect.nhs.uk

References