the absence of trauma. Urgent surgery is essential both to control pain and to ensure survival. Most patients who develop this infection have an underlying malignancy and clinicians should be aware of this association. We present a case of bifocal myonecrosis which to our knowledge has not been reported previously.

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SPONTANEOUS BIFOCAL CLOSTRIDIUM SEPTICUM GAS GANGRENE

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Clostridium septicum gas gangrene (myonecrosis) is an acutely painful and rapidly fatal infection occurring in the absence of trauma. Urgent surgery is essential both to control pain and to ensure survival. Most patients who develop this infection have an underlying malignancy and clinicians should be aware of this association. We present a case of bifocal myonecrosis which to our knowledge has not been reported previously.

Photograph showing the right upper limb on initial presentation.

Gas gangrene or clostridial myonecrosis is a rare but potentially devastating condition. Rapid and extensive destruction of muscle occurs because of proteolytic toxins produced by the species of Clostridium. In its classic, traumatic form, clostridial gas gangrene occurs in association with gross destruction of soft tissues. Spontaneous gas gangrene (myonecrosis) caused by infection with Clostridium septicum is very rare and has a unique association with cancer of the colon. It is characterised by aggressive invasion and destruction of muscle with profound septic shock and if untreated is usually fatal within 48 hours. Mortality is high even with aggressive treatment.

Case report

An 83-year-old man presented with a one-day history of acute pain in his right forearm associated with rapidly progressive swelling. Examination revealed a markedly swollen and discoloured right forearm, with large blisters filled with clear serous fluid, and crepitus (Fig. 1). No distal pulses were present. He was haemodynamically stable with a temperature of 37.4°C. There was no history of trauma, but two months previously a diagnosis of carcinoma of the caecum had been made. A radiograph showed gas in tissue and fascial planes (Fig. 2). Fluid from the blisters was sent for bacteriological investigation and intravenous antibiotic therapy was started with gentamycin, clindamycin and clarithromycin. He was allergic to penicillin.

Discussion

Gas gangrene is usually associated with trauma, Clostridium perfringens being the most common pathogen. In a major review of the literature, it was found to occur after injury in 49% of patients, and after surgery in 35%. In 16% of patients, it had occurred spontaneously.

Spontaneous myonecrosis is typically caused by Clostridium septicum, a motile, anaerobic Gram-positive rod. This organism accounts for 4% to 20% of clostridial infections. Infection with Clostridium septicum may be associated with colorectal or haematological malignancy, diabetes mellitus and drug-induced immunosupression. It is believed that Clostridium septicum gains access through the bloodstream by colonising a defect in the
mucosa of the large bowel. Once established, it may cause a locally invasive infection, or spread via the bloodstream to skeletal muscle causing myonecrosis.

Our patient showed all the typical features of clostridial myonecrosis. Bacteriological examination of the fluid from the blister confirmed the presence of Clostridium septicum. Infection spread rapidly despite early aggressive management and the patient developed a second lesion. His general condition deteriorated and he died.

The diagnosis of spontaneous myonecrosis is often clear on clinical grounds and investigations should not delay surgery. The primary aim of treatment is thorough debridement of non-viable tissues and aggressive antimicrobial therapy with supportive measures.4

Infection with Clostridium septicum is a rare complication of some conditions. Awareness is vital to ensure urgent treatment thereby maximising the chances of survival. Patients who survive the infection and are not known to be in the high-risk group, should be screened for underlying colonic or haematological malignancy.

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References