**LETTER TO THE EDITOR**

## Metastatic Gas Gangrene

The Editor

Sir,

Metastatic gas gangrene is a rare clinical entity. Diabetics and other immuno-compromised persons are at increased risk and there is a strong association with malignancies, particularly colorectal cancer.

A 52-year old female presented to the emergency department with pain in the left shoulder. She reported abdominal pain and one episode of vomiting the previous evening. She denied any trauma, but was known to be diabetic with colorectal carcinoma. An abdominal mass was palpated. Her shoulder and upper arm were swollen and there was crepitus. Radiographs of the shoulder revealed air fascial planes outlining the left deltoid (Fig. 1).

Fig. 1: Extensive air is noted outlining the left deltoid muscle.

The patient was resuscitated and received parenteral ceftriaxone, penicillin G and gentamycin. Six hours later the crepitus had extended to the left scapular region. Blebs had developed over the left arm (Fig. 2). She was taken to the operating theatre where the left deltoid muscle was removed. The excised muscle appeared normal. Twenty-four days after admission she had cardiac arrest in the intensive care unit. Tissue cultures grew clostridium species.

Metastatic, atraumatic or spontaneous gas gangrene accounts for 20% of all cases of gas gangrene. The condition is due to enteric clostridium species. Two-thirds of infections

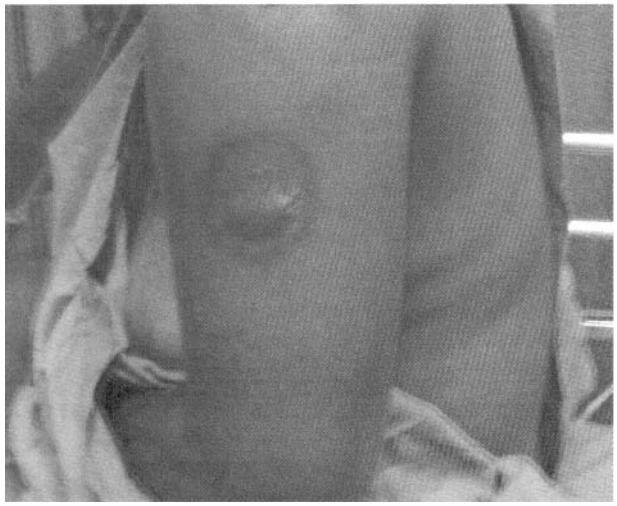

Fig. 2: Appearance of the patient's left shoulder six hours after presentation. Note the development of violaceous areas of discolouration with central bulla formation.

are attributed to *C septicum* and one-third to *C perfringens* (1). A breach in the gastrointestinal mucosa allows haematogenous spread, typically to an upper or lower extremity. This may cause the abdominal pain reported in some cases, notably the index case (3). Severe pain develops in the affected limb. Initially, skin and soft tissue appear normal contributing to delayed diagnosis. Rapid discolouration ensues with blebs and crepitus. Sepsis then develops (2, 3).

*Clostridium septicum* and *C perfringens* are anaerobic gram-positive gas-forming organisms. *Clostridium septicum* is more virulent and aerotolerant than *C perfringens*, limiting the usefulness of hyperbaric oxygen therapy (2). *Clostridium septicum* produces enzymes which limit the recruitment of inflammatory cells. Consequently, tissues appear relatively un-inflamed when resected. Generally, Clostridium species are isolated. Specific identification of *C septicum* requires specialized techniques.

Triple therapy with clindamycin, gentamycin and penicillin is recommended (2). Hyperbaric oxygen therapy may be most effective for treatment of infections in remote sites such as the trunk, where extensive debridement may not be possible (2).

Metastatic gas gangrene should be considered in persons with unexplained limb pain with crepitus. A history of an episode of abdominal pain preceding the onset of limb pain may be an important diagnostic clue. Air fascial planes may be seen on X-rays.

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