

## Necrobacillosis—an unusual cause of cervical abscess

S. E. CHALSTREY, F.R.C.S., H. O. L. WILLIAMS, F.R.C.S., G. REILLY, F.R.C.S. (London)

### Abstract

Necrobacillosis is a rare infection which may be fatal if inadequately treated. We present a case demonstrating the classical clinical picture upon which correct diagnosis depends. The need for a high index of suspicion is highlighted and appropriate management is discussed.

### Introduction

*Fusobacterium necrophorum* is an anaerobic commensal of the oropharynx, gastro-intestinal and genito-urinary tracts. Rarely, the organism becomes pathogenic resulting in the clinical condition, necrobacillosis. This often occurs in previously fit, healthy individuals who are not immunocompromised in any way. The characteristic presentation consists of a sore throat, rapidly followed by an acute septicaemic illness together with multiple metastatic abscesses, most often in the lungs. Abscesses also occur in the liver, kidneys, bones and joints. We present a case demonstrating not only the classical clinical picture, but also the potential diagnostic delay related to widespread ignorance of this condition.

### Case report

A 19-year-old, previously fit and healthy Negro man of West Indian parents presented with a two week history of sore throat and fever. His general practitioner had already treated this with oral penicillin followed by erythromycin. On direct questioning, the patient also admitted to weight loss, night sweats, haemoptysis and pleuritic chest pain. On examination, he was pyrexial (38.5°C) and the pharynx was hyperaemic. There was a 4 cm diameter, fluctuant mass in the left posterior triangle. Chest

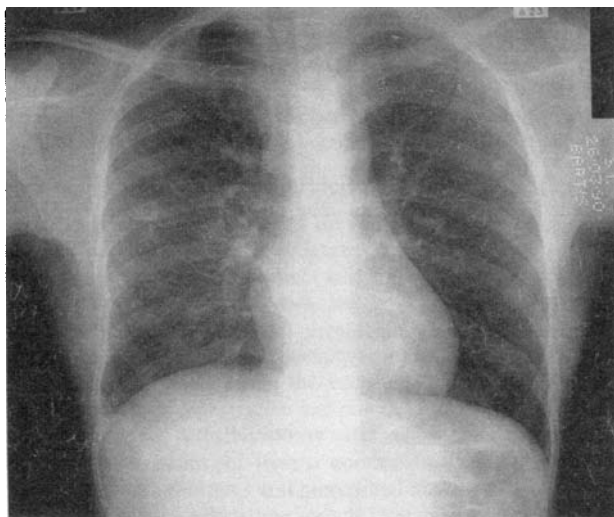


FIG. 1  
Chest X-ray showing cavitating lesion right lung.

X-ray (Fig. 1) revealed a 1.5 cm cavitating lesion in the right upper zone. He had a leucocytosis of  $17.9 \times 10^9/l$  and the ESR was 42 mm/hr.

This clinical picture suggested tuberculosis as a likely diagnosis. The neck mass was aspirated and 5 ml of pus was obtained. This was sent for microbiological examination which revealed Gram negative rods but failed to provide evidence of acid-fast bacilli.

The opinion of the chest physicians was sought and a clinical diagnosis of necrobacillosis was proposed. Specific culture techniques were employed and the diagnosis was confirmed by isolation of *Fusobacterium necrophorum*. Treatment was commenced with intravenous penicillin and metronidazole and the patient was regularly re-assessed for evidence of further abscess formation. Recovery was typically slow and intravenous therapy had to be maintained for over two weeks to achieve complete resolution of the pyrexia and the cervical and pulmonary abscesses.

### Discussion

Necrobacillosis is a rare disease and its features may be unfamiliar to many clinicians. The diagnosis is achieved by recognition of the typical clinical picture. This comprises a sudden onset of rigors, sore throat and metastatic abscess formation, most often in the lungs, but occasionally occurring in other organs including the liver, kidneys, and bones (Eykynd and Phillips, 1987).

The diagnosis is confirmed by bacterial culture, but this is technically difficult, requiring prolonged incubation under strictly anaerobic conditions. Microbiological confirmation of the diagnosis therefore depends upon clinical suspicion.

Although the organism is described as being extremely sensitive *in vitro* to a wide variety of chemotherapeutic agents, in practice the condition requires prolonged treatment with intravenous antibiotics to achieve complete resolution. The treatment of choice is parenteral penicillin and metronidazole, continued until the pyrexia settles and the abscesses show signs of resolution (Moore-Gillon *et al.*, 1984). This may take several weeks (Seidenfeld *et al.*, 1982). If inadequately treated the condition may relapse, leading to significant morbidity and possibly death.

The clinical picture described, occurring in a previously fit, healthy young adult should alert the clinician to the possibility of necrobacillosis and its associated therapeutic implications. Treatment can be commenced immediately but specific culture techniques should be requested to confirm the diagnosis.

**References**

- Eykyn, S. J., Phillips, I. (1987) Section 5. Infectious Subsection. Anaerobic bacteria. Chapter 50. In: *Oxford Textbook of Medicine* (Weatherall, D. J., Ledingham, J. G. G., Warrell, D. A., Eds.) Oxford University Press, p. 5.229.
- Moore-Gillon, J., Lee, T. H., Eykyn, S. J., Phillips, I. (1984) Necrobacillosis: A forgotten disease. *British Medical Journal*, **288**: 1526–1527.
- Seidenfeld, S. M., Sutker, W. L., Luby, J. P. (1982) *Fusobacterium necrophorum* septicaemia following oropharyngeal infection. *Journal of the American Medical Association*, **248**: 1348–1350.

Address for correspondence:  
Miss S. E. Chalstrey,  
Department of Otolaryngology,  
St Bartholomew's Hospital,  
West Smithfield,  
London EC1.

**Key words:** *Fusobacterium necrophorum*; Abscess, cervical.