Methicillin Resistant *Staphylococcus Aureus* in a Liver Abscess

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SUMMARY: The case is described of a 30-year-old man who presented to the Army Medical Services with pyogenic liver abscess from which methicillin resistant *Staphylococcus aureus* (MRSA) was isolated.

MRSA in pyogenic liver abscess has to date not been reported in the recent English literature.

Introduction

MRSA is a cause of infection in many countries (1). Treatment is difficult and costly (2). Isolation from a liver abscess has not to date been reported in the English literature.

We report a case of MRSA in a 30-year-old British soldier with a hepatic abscess managed by percutaneous drainage.

Case Report

A 30-year-old soldier sustained a ruptured liver in Croatia in January 1993 as result of a fall whilst fitness training. The injury was repaired locally and the patient was transferred back to Queen Elizabeth Military Hospital, Woolwich. On admission he was found to have bilateral pleural effusions and a hepatic artery aneurysm, which was subsequently embolised at Kings College Hospital, London. MRSA was isolated from the laparotomy wound and stool. The phage type was 622/626.

He returned to Germany, where he was based, in April 1993 but required admission to the British Military Hospital Rinteln in September 1993 complaining of right shoulder tip pain, night sweats and fever. Examination revealed a right basal consolidation and an intermittent pyrexia. Investigations demonstrated a marked neutrophilia, a grossly elevated C Reactive Protein, and a raised Gamma G T. Transaminases. Albumin, and bilirubin were normal. Chest radiography showed consolidation of the right base. An ultrasound scan and CT of the liver revealed an abscess measuring 5 x 8cm in the right lobe. 500 mls of pus was initially drained from the abscess through a subcostal drain which was then left *in situ*.

MRSA was isolated from this pus which was of an identical phage type to that isolated at Woolwich. The organism was resistant to erythromycin, tetracycline, gentamicin, fusidic acid, and ciprofloxacin, but sensitive to clindamycin, rifampicin, teicoplanin and vancomycin.

Initial antibiotic therapy was vancomycin 1 Gram intravenously, but this was stopped after 10 days.

The drain remains *in situ* 18 months later. The volume of drainage was initially a litre of fluid daily but this gradually decreased to an intermittent drainage of a few mls weekly. The abscess cavity continues to be managed conservatively with an in dwelling catheter.

Discussion

Pyogenic liver abscesses are caused by a wide range of organisms of which *S aureus* is one of the most common. The mortality rate varies from 2.2% to 53% depending on the aetiology (3). The currently preferred management option is percutaneous drainage if possible but if not the surgery (4).

Despite good initial drainage it has taken a long time to eradicate MRSA in this patient. This was partly related to the extensive previous surgery including embolisation of his hepatic artery and also the difficulty in treating his MRSA. There is however no evidence that this organism was a particularly virulent strain.

MRSA is an ever present threat to military personnel deployed to a wide range of locations, especially where local medical assistance is required. Infection control policies are in place within the United Kingdom Defence Medical Services to identify this problem and to prevent importation of infection into receiving military hospitals in the United Kingdom and in Germany.

The MRSA isolated from this patient was not a recognised epidemic strain and the organism did not spread beyond the abscess cavity, nevertheless the difficulty in eradicating the organism was well illustrated in this case.

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