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Recurrent episodes of enterococcaemia from an infected Hickman line precipitated by ganciclovir infusion

Sir,

Cytomegalovirus (CMV) is the commonest cause of life-threatening viral infections in patients with the acquired immunodeficiency syndrome (AIDS). Treatment of manifestations such as retinitis and pneumonitis requires lifelong maintenance therapy as the relapse rate is high if only primary treatment is given.[1] Hickman and Broviac catheters are frequently used for long term venous access[2] either to administer ganciclovir or foscarnet. The major anxiety regarding their use is the increased risk of infection. The organisms responsible are predominantly staphylococci or fungi.[2,3]

We describe a case of recurrent episodes of enterococcal bacteraemia precipitated by infusion of ganciclovir through a contaminated Hickman catheter. This organism, which rarely infects this site, appears to have produced rigors coinciding with ganciclovir infusion, leading to the belief that the patient had developed allergy to the drug.

A 36 year old homosexual man with AIDS was admitted with five rigors. Four of these episodes occurred during or just after ganciclovir infusion through his Hickman line. Six months prior to admission he was diagnosed to have a *Pneumocystis carinii* pneumonia (PCP) and concurrent CMV infection, the latter confirmed with a lung biopsy. A Hickman line was subsequently inserted. He received thrice weekly intravenous ganciclovir at home in addition to low dose oral zidovudine and fortnightly prophylactic nebulised pentamidine isethionate.

On admission the patient who had suffered these symptoms at home, was well and afebrile. The neutrophil count was normal (3000/mm^3).

Twenty-four hours following admission he experienced two further episodes of fever (> 38.5°C) associated with rigors. The first bout was unrelated to ganciclovir infusion but the second occurred 5 minutes after commencement of one. During both episodes blood cultures (peripheral as well as Hickman site) were taken. In view of the temporal relation of the symptoms to the infusion of the drug, the ganciclovir was discontinued as we suspected allergic responses. At this juncture the first set of blood cultures revealed growth of *Proteus mirabilis*. He was treated successfully with ciprofloxacin. Further investigations including urine cultures and intravenous pyelography (both negative) failed to identify the focus responsible for the Proteus bacteraemia. Three days following discharge prolonged incubation of both blood cultures grew *Enterococcus faecalis* type 3.

In view of the presence of enterococcaemia associated with the symptoms it was suspected that the Hickman line was the probable source of sepsis. Two further Hickman line blood cultures grew enterococci. He was not given any further ganciclovir and remained well. Following removal of the line, culture of the tip revealed growth of enterococci and coagulase negative *Staphylococcus aureus* (presumably a contaminant from removal). *P. mirabilis* was not isolated here.

The above case illustrates how infusion of material through an infected Hickman line may lead to clinically significant episodes of bacteraemia in the absence of bacteraemia at other times. These may be mistaken for an allergic reaction to the infusate. Enterococcal infections were previously looked upon as pathogens of low virulence that may produce urinary tract infections or endocarditis, but are now appreciated to be sometimes more virulent.[4] Furthermore these organisms which are notoriously resistant to many antibiotics have shown moderate *in vitro* activity against ciprofloxacin,[5] though this is not the agent of choice. Ampicillin and vancomycin still remain the drugs of choice in the UK.

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