

by immunofluorescence though both these sera and the previous sera were found to be positive by Western blot (C. Mary, unpublished data). The *N*-methylglucamine and interferon-gamma combination was reinstated and this restored a normal body temperature, improved the general status, partially relieved the hepato-splenic tumour syndrome and normalized the myelogram.

More than 50 cases of visceral leishmaniasis have been reported during HIV infection and this parasite seems to have developed an opportunist behaviour in this situation.⁴ The use of antimonials and pentamidine often gives disappointing results in HIV-infected patients whereas there are only a few alternative, less effective therapies.⁵

Interferon-gamma was found to be capable of potentiating the anti-leishmanial effect of glucamine both *in vitro* and *in vivo*.⁶ This combination induced a partial remission on two occasions in our kala-azar patient in whom a more conventional therapeutic regimen was ineffective. Clinical studies are under way to specify the optimum protocol.⁷

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Pneumococcal bacteraemia: a late complication following endoscopic variceal sclerotherapy

Sir,

A low rate of blood culture positivity after elective endoscopic injection sclerotherapy (EIS) has been reported when blood cultures are obtained 5 and 10 minutes after this procedure.¹ We here report an episode of pneumococcal bacteraemia in a cirrhotic patient occurring 10 hours after an emergency EIS procedure. A similar delay in the appearance of bacteraemia due to other microorganisms may be responsible for an underestimated incidence of bacteraemia following EIS in previous investigations.²

A 68 year old male alcohol-associated cirrhotic patient was admitted because of massive haematemesis. Physical examination revealed jaundice and ascites. Endoscopy revealed the presence of oesophageal variceal bleeding and an EIS procedure using an Olympus Q-10 fibroscope was performed. A total of 15 ml of 5% ethanolamine oleate was injected and bleeding was controlled. On the seventh hospital day, haematemesis recurred and a further EIS procedure was performed. Ten hours after sclerotherapy, the patient developed high fever (39°C) and chills. A chest film was clear. Ascitic fluid and urine cultures were negative. Three sets of blood cultures yielded growth of *Streptococcus pneumoniae*. Oropharyngeal exudate was unfortunately not obtained. Cefamandole 1 g every 6 hours, during 7 days, was administered. The symptoms improved after treatment and no overt gastrointestinal bleeding occurred again after sclerotherapy until discharge 2 weeks later.

Studies that have evaluated the incidence of bacteraemia following EIS have shown a marked variability of results, ranging from 5% to 50%.^{1–4} On the other hand, although oropharynx or contaminated endoscopes have been implicated as the source of the bacteraemia, most of the microorganisms isolated (*Corynebacterium spp.*, *Staphylococcus epidermis*, *Bacillus spp.*,¹ corresponded to skin flora and they were not simultaneously isolated from pharyngeal or from endoscopy surveillance cultures. These data are controversial and the role of prophylactic use of antibiotic in this setting is therefore not well defined. Our findings point to the oropharynx as the most probable source of bacteraemia, since there was no evidence of coexisting lung or peritoneal pneumococcal infection in this case.

To the best of our knowledge, delayed pneumococcal bacteraemia following EIS has not been previously reported. The development of bacteraemia later than it is currently recognized, as occurred here, could explain the low rate of bacteraemia found when blood cultures are obtained immediately after an EIS.¹

Bacteraemia due to *S. pneumoniae* following EIS may be a life-threatening event in the cirrhotic patient, and it could be favoured by the abnormal splenic function present in these patients. Late pneumococcal bacteraemia must be suspected in this setting. Pneumococcal vaccine administration and/or antibiotic prophylaxis in these cases deserves further evaluation.

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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 access² 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/mm³).

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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