Fortuitous detection of campylobacter bacteremia.

Sir,

Two cases in whom Bactec blood cultures produced a delayed-signal positive/smear negative result, yielded *Campylobacter jejuni* when subcultured according to local practices designed for the recovery of Brucella species. Patient 1 - A 6 week old baby boy presented with a one week history of diarrhoea during which treatment had consisted of a "special milk" formula. He had been passing 2-3, greenish-yellow stools (no blood) several times a day but there had been no vomiting. On examination, his temperature was 37°C, he was mildly dehydrated with a slightly depressed fontanelle and his buttocks were irritated. His electrolytes were within the normal range. Pedalyte was administered, a blood culture was drawn and he was discharged with instructions to return to hospital if his condition deteriorated. Three days later the blood culture was reported as positive for Gram-negative bacilli. Recall by telephone was attempted but was unsuccessful. The patient did not subsequently return to hospital. *Campylobacter jejuni* was isolated from the blood culture. It was susceptible to erythromycin. Patient 2 - A 5 year old boy with a 1-2 day history of fever and a "chest cold" was seen in an out-patient clinic. No mention of diarrhoea was made. An unspecified medication was prescribed. Four days later, still symptomatic, he was seen at the hospital Emergency Department. His temperature was 37.6°C, but he was noted to be in no distress. A chest X-ray showed mild bilateral airway inflammation. A blood culture was taken and he was discharged on cefuroxime, axetil, tylenol and actifed. Three days after discharge the blood culture became positive. Recall by telephone was unsuccessful. The blood culture isolate was subsequently identified as *Campylobacter jejuni*, susceptible to erythromycin. Despite being the commonest cause of bacterial diarrhoea in the world, bloodstream infection by *C. jejuni* is rare. It is thought that the true incidence might be underestimated partly as a result of suboptimal blood culturing practices. Characteristically, Campylobacters first signal positive in Bactec blood cultures after 3 day's incubation and often no organisms are discernible on Gram stain. This type of delayed signal positive/smear negative pattern in our locality is suggestive of brucellosis and consequently such samples are routinely subcultured to brucella culture medium (in addition to aerobic and anaerobic blood agar) and are incubated at 37°C in 5-10% carbon dioxide for 5-7 days. It would seem that these conditions will allow the recovery of both Brucella or Campylobacter; while the latter prefer microaerophilic conditions for growth, this requirement, is apparently offset to a certain extent by prolonged incubation. Both the cases described here occurred in male children, and were due to *C. jejuni* as expected. In the first case the bacteremia probably resulted from a spillover of bacteria into the blood from the gastrointestinal infection. In an otherwise health host in whom bacteremia is discovered several days after blood cultures are performed, usually after complete recovery, no specific therapy may be required. In the second case, the underlying illness was respiratory in nature. Campylobacter bacteremia is recognized as being associated with pulmonary disease. In summary, the practice of prolonged subculture of delayed-signal positive/smear negative Bactec blood cultures for the detection of Brucella may fortuitously uncover occasional cases of Campylobacter bacteremia.

Robert M Bannatyne
Michael Rich
Department of Pathology & Laboratory Medicine
King Fahad National Guard Hospital
PO Box 22490
Riyadh 11426
Kingdom of Saudi Arabia

References