

## Letters to the Editor

### Ceftazidime-resistant *Salmonella Enteritidis* in Jamaica

The Editor

Sir,

The authors report the first isolate, in Jamaica, of *Salmonella enteritidis* resistant to ceftazidime. This is the second such isolate reported in the Caribbean, the first isolate having been found in Trinidad and Tobago in 1998 (1).

The 27-year-old female, single and unemployed, with known homozygous sickle cell disease came from a community in Kingston near to the hospital. She presented to the Accident and Emergency Department of the University Hospital of the West Indies (UHWI) complaining of fever and shortness of breath. She had two watery stools that morning. Clinically, she was found to be mildly febrile (38.5°C) dehydrated and tachypnoeic (respiratory rate 72 breaths per minute) with harsh vesicular breath sounds in both lower lung fields. She had jaundice and a tender, smooth hepatomegaly. Her HIV status was not investigated.

She was admitted to the medical ward and later transferred to the UHWI Intensive Care Unit (ICU) for possible ventilatory support. She was treated with cefuroxime and erythromycin. She was discharged back to the medical ward the same day, and loose stools, at least five episodes, were noted during the following day. She was discharged in stable condition after eight days.

One week prior to the patient's hospital admission, she had been seen at the Sickle Cell Unit with symptoms of a lower urinary tract infection and had been treated with oral amoxicillin/clavulanate, taken for six days. The evening before the onset of the diarrhoea, she had eaten pig trotters cooked at home. The patient had not travelled abroad.

Stool samples collected in the ICU and on the medical ward were watery but without blood or mucus and yielded *Salmonella enteritidis*. The first sample had two morphologically distinct non-lactose fermenters with differing sensitivities. One was ceftazidime resistant, as was the isolate from the second sample. Resistance to amoxicillin, amoxicillin/clavulanate and cefuroxime was found for both of these isolates and they were sensitive to co-trimoxazole, chloramphenicol, gentamicin and ciprofloxacin. The ceftazidime-resistant isolates were collected and later serotyped as *Salmonella enteritidis* serotype Heidelberg. The first ceftazidime-resistant isolate was re-tested using the Vitek system (bioMérieux, France) with GNI<sup>+</sup> and GNS-111 cards which identified salmonella of biotype 6020724533 resistant to ceftazidime (S 32 mg/L) and ampicillin/sulbactam (S 32 mg/L), but sensitive to cefotaxime, cefepime and cefotetan (S 4, # 4 and # 16 mg/L). A double-disk diffusion test with clavulanate (2) did not demonstrate reversal of the ceftazidime resistance, suggesting that the nature of the ceftazidime resistance was not due to an extended-spectrum beta-lactamase. Aerobic blood cultures had no growth after seven days of incubation.

A mid-stream urine sample had been collected at the first presentation. The urine was cloudy and showed numerous leukocytes and Gram negative bacilli. *Escherichia coli* (10<sup>5</sup>/ml) was grown and found sensitive to all antibiotics tested: amoxicillin, cefazolin, cefuroxime, ceftriaxone, cotrimoxazole, gentamicin and quinolones, using the disk diffusion method, applying National Committee for Clinical Laboratory Standards (3).

Salmonellae are common stool and blood isolates from patients seen at UHWI. During 2003, there were 19 and 15 isolates from stool and blood, with *salmonella* respectively, but no other isolate was ceftazidime resistant. These included isolates from three patients with salmonella bacteraemia who were known to have sickle cell disease, a well recognized association in Jamaica (4).

The emergence in *Salmonella* species with resistance to third-generation cephalosporins would be of considerable concern in Jamaica, particularly to clinicians who will see and treat sickle cell patients with bacteraemia. However, this may prove to be an isolated event. A follow-up survey from Trinidad and Tobago, conducted in 2001, did not find any additional isolate of ceftazidime resistant salmonella (5).

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