J Diarrhoeal Dis Res 1988 Mar;6(1):41-42
0253-8768/88 $ 1.00+0.10

LETTER TO THE EDITOR

CHLORAMPHENICOL-RESISTANT SALMONELLA TYPHI IN A PATIENT PRESENTED WITH WATERY DIARRHOEA

Sir,

Isolation of chloramphenicol-resistant *Salmonella typhi* were occasionally reported from Bangladesh (1,2), but more frequently from India (3,4,5) and other countries (6,7). In this report we give the clinical picture of a typhoid patient and a possible mechanism of drug resistance of the isolated *S. typhi*.

A 23-year-old woman was admitted in May 1986 with a history of watery diarrhoea for 6 days and fever for 15 days. On admission, she was delirious and had fever (39.2°C), and a slightly enlarged and tender liver. Blood tests showed normal white cell counts but low platelets (125000/mm^3) and hyponatraemia (Na^+ 122 mmol/l). There were 6-8 and 10-12 pus cells per high power field in the stool and urine deposit samples, respectively. The Widal test showed a raised titre of 1:640 using both the O-and H-antigens.

A treatment with chloramphenicol in a dose of 70 mg/kg per day for 5 days did not bring remission of fever. There was a deterioration of the general condition of the patient with a distension of the abdomen. *S. typhi* was isolated from a blood culture. The isolate was resistant to chloramphenicol, but sensitive to co-trimoxazole and gentamicin. The antibiotic therapy was changed to co-trimoxazole. The fever responded but did not attain full remission even after 7 days of treatment. Repeated urine culture yielded *Klebsiella pneumoniae* ($2x10^6$/ml), resistant to chloramphenicol and co-trimoxazole, but sensitive to nitrofuratoin. The fever completely subsided on treating the patient with nitrofuratoin. On plasmid analysis, the isolate of *S. typhi* showed a plasmid of 110 megadalton. A conjugational experiment (8) revealed that this plasmid was self-transferable to a recipient *E. coli* K-12 (14 R525) and caused chloramphenicol resistance.

Patients with typhoid fever failing to respond to a treatment with chloramphenicol are known (9). It is, however, a rare event. During the last 6 years, we did not come across a single case of chloramphenicol-resistance among about 760 typhoid patients. In the present patient the concomitant infection of the urinary tract with co-trimoxazole-resistant *Klebsiella* with the systemic disease caused by co-trimoxazole-sensitive *S. typhi* accentuated the diagnostic and therapeutic problems. That the chloramphenicol resistance of the *S. typhi* isolate was due to the particular transferable plasmid can not be claimed with full confidence by a single plasmid-transfer experiment mentioned above. Further studies are necessary to confirm it.

Clinicians in this part of the world should refrain from using chloramphenicol indiscriminately to minimise the possibility of emergence of a chloramphenicol-resistant strain of *S. typhi*. They also should maintain surveillance for early detection of such a strain which may be of public health concern.

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