MIXED SALMONELLA INFECTION

Dear editor,

We have recently isolated both Salmonella enterica serovar Typhi and Salmonella enterica serovar Paratyphi A from a single blood culture. We present the details of this uncommon case.

A 22-year-old man presented on 22nd October 2007 with high fever, pain abdomen and vomiting of one week’s duration. There was no history of jaundice, diarrhoea or rash. Past history did not reveal any illnesses. On examination he was febrile (39°C), there was no pallor, icterus or rash. The abdomen was soft, liver was palpable 1 cm below the right costal margin and spleen was just palpable. No abnormalities were detected in the cardiovascular, respiratory and nervous systems. He was diagnosed as a case of suspected enteric fever and a blood culture was requested.

Blood culture was done using the BacT/ALERT FA aerobic bottle (bioMérieux). When the bottle was flagged positive by the system, a Gram stain was done from the bottle which revealed Gram negative bacilli. Subculture was done on 5% sheep blood agar and MacConkey’s agar, and a direct sensitivity testing and biochemical identification set (the standard tests including TSI) was inoculated directly from the bottle. After overnight incubation, the TSI showed the presence of slight H₂S and gas. This alerted us to the possibility of a mixed culture. Further reincubation of the subculture plates showed two different types of colonies - large and small nonlactose fermenters. These independently gave the reactions for Salmonella enterica serovar Typhi and Salmonella enterica serovar Paratyphi A respectively and also agglutinated with the corresponding antisera. Both isolates had the same antibiogram (sensitive to ampicillin, chloramphenicol, cotrimoxazole, ciprofloxacin, ceftriaxone and resistant to nalidixic acid). The patient was treated with oral ciprofloxacin for 14 days and responded well.

Simultaneous infection with different Salmonella serotypes is an unusual finding and rarely reported.[1-3] Although enteric fever is endemic in India, mixed infections are not reported often. Perera et al., have suggested that prior antibiotic therapy and limited use of blood cultures may be some of the reasons for missing mixed infections. The present communication highlights the possibility of mixed Salmonella infections in suspected enteric fever patients and the need to be vigilant to identify them.

References

*D Debdas, S Joshi
Department of Microbiology, Manipal Hospital, Airport Road, Bangalore - 560 017, Karnataka, India

*Corresponding author (email: <duttaangshuman@rediffmail.com>)
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