Salmonella enteritidis Related Prosthetic Joint Infection

The Editor

Sir,

Salmonella spp is a very rare cause of prosthetic joint infection (PJI) (1–10). This report presents two cases of *Salmonella enteritidis* (*S enteritidis)* related PJI.

Case 1

In March 2004, a 74-year old female was referred to the infectious diseases (ID) clinic with the main complaint of purulent discharge and pain from an operation site at the hip for three months. In her history, it was learnt that she had received a hip prosthesis at another centre due to hip fracture in July 2003. She had had no complaint until December 2003. On her routine follow-up in December 2003, her physical activity was normal and she had no pain but her erythrocyte sedimentation rate (ESR) had increased. Ten days after this, purulent discharge was noted at the operation site. She had been hospitalized and rifampin and ornidazol were started empirically. She was discharged after 15 days of treatment but her complaints still continued. One week before ID consultation, she was hospitalized on the orthopaedics ward at the authors' hospital. She underwent operation for the removal of the prosthesis. Biopsy cultures revealed *S enteritidis* sensitive to (chloramphenicol, trimethoprim/sulfamethoxazole, ciprofloxacin and resistant to ampicillin and amoxicillin/clavulanate. She had no history of diarrhoea or fever since July 2003. She did not have any remarkable finding except purulent drainage from the operation site and decreased range of motion on physical examination. Her laboratory findings were as follows: leukocytes: 14 500/mm^3, 82% polymorphonuclear leukocytes (PNL), ESR: 130 mm/h, (Westergren), C reactive protein (CRP): 5.0 mg/dL. Urine, stool and blood cultures did not reveal *S enteritidis* or other pathogens. On biphasic bone scintigraphy, there were signs of infection in the area of the removed prosthesis. She was treated with intravenous ciprofloxacin 400 mg twice daily for three weeks, followed by ciprofloxacin orally 750 mg twice daily for three months. Drainage from her operation site decreased and ceased on the 15th day of her treatment. C-reactive protein was 0.50 mg/dL and ESR was 40 mm/h (westergren) at the end of the 18th month of treatment.

Case 2

In June 2004, a 24-year old male was seen in the internal medicine clinic. His main complaint was pain in the hip. He had a diagnosis of dermatomyositis and polymyositis since April 2003 and had a history of *S enteritidis* bacteraemia in August 2003. He had no fever. His physical examination was normal except for the tenderness and swelling in his hip.

He had received hip prosthesis due to bilateral aseptic necrosis in February 2004 (biopsy cultures at that time were sterile). Aspiration of the hip joint was performed on the day he was consulted (direct microscopy revealed >1000 leukocytes/mm3, Gram stain was negative and bacterial culture revealed *S enteritidis* sensitive to trimethoprim/sulfomethoxazole and ciprofloxacin but resistant to ampicillin, amoxicillin/clavulanate and chloramphenicol. He had no history of diarrhoea since his operation. His laboratory findings were as follows: leukocyte 10.500/mm^3, 80% PNL, ESR: 46 mm/h, CRP: 7.7 mg/dL. He had been using methotrexate and prednisolone for the past one year. Urine, stool and blood cultures did not reveal *S enteritidis* or other pathogens. His abdominal ultrasonography was normal. On biphasic bone scintigraphy, there were signs of infection at the site of the prosthesis. He was treated with intravenous ciprofloxacin 400 mg twice daily for three weeks, followed by ciprofloxacin orally 750 mg twice daily for three months. The patient had a CRP value of 4.6 mg/dL and ESR of 14 mm/h (Westergren) at the end of a 12-month follow-up.

Whereas the first case had only osteoarthritis, the second case had dermatomyositis and polymyositis and had received prednisolone and methotrexate over the previous 12 months. An immunosuppressive state might have played a role in the development of the infection in the second case (10).

These two cases show that appropriate culture specimens are vital in the diagnosis and management of PJI and ciprofloxacin may be used successfully in the treatment of salmonella related PJI.

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