

Case Report

**SALMONELLA SACROILIITIS IN A PATIENT WITH SYSTEMIC
LUPUS ERYTHEMATOSUS**

Abdurahman Al-Arfaj, MBBS, MRCP(UK), FRCP(C) * Hasan Naddaf, MBBS,
MRCP(UK) **

A patient with systemic lupus erythematosus on steroids and azathioprine presented with limping and was found to have Salmonella sacroiliitis. Salmonella sacroiliitis which has not been reported before in systemic lupus erythematosus is reported herein.

Infection is the leading cause of death in systemic lupus erythematosus (SLE). There are a number of possible predisposing factors for this increased susceptibility to infection. Some of these are abnormalities of immune function (both cell mediated and antibody mediated immune responses), deficient opsonization, impaired splenic function and splenic atrophy in addition to the use of immunosuppressive treatment. Among these infections, Salmonella infection is more common in patients with SLE than any other connective tissue disease especially in hospitalised patients^{2,3}.

In patients with SLE, salmonella septic arthritis has been reported to affect knees, hips, ankles and elbows but not sacroiliac joints⁴⁻⁶. This is the first report of Salmonella sacroiliitis in a patient with SLE.

THE CASE

RH is a 16 year old Palestinian female student who has been diagnosed as having SLE in 1991 on the basis of butterfly rash, arthritis, positive antinuclear antibody and anti-double stranded DNA. One year later, she was admitted to the hospital for a flare up of her SLE manifested by arthritis, fever, sweating, pancytopenia, splenomegaly and episodes of dyspnoea and hypoxia necessitating admission to intensive care unit. She was treated with antibiotics, pulse methyl prednisolone, plasmapheresis and intravenous immunoglobulin.

* Consultant

** Senior Registrar

Rheumatology Unit

Department of Medicine

King Khalid University Hospital

Kingdom of Saudi Arabia

Following recovery, she was discharged from the hospital on prednisolone 50 mg, azathioprine 75 mg and chloroquine 250 mg daily. Her hospital course was complicated with culture negative diarrhoea.

Three weeks after discharge from the hospital, she came to the clinic with a one week history of pain in the right inguinal and gluteal areas and low back pain. The pain was mainly over the gluteal areas radiating down to the knee causing walking difficulty. There was no history of trauma and other joints were not painful. She denied any history of fever. Physically, she looked ill though afebrile. She had splenomegaly of 2 cm. Examination of the right hip joint showed painful flexion and internal rotation, however, abduction was full. Sacroiliac stress tests were negative. She was admitted with possibility of avascular necrosis of femoral head or septic arthritis of the hip. X-ray of pelvis showed no evidence of avascular necrosis but there was haziness of the right sacroiliac joint (Fig 1). Her blood count showed WBC of $2.4 \times 10^9/L$,

haemoglobin of 6.8 g/dl, and platelets of 225,000. Initial bone scan was reported as early avascular necrosis of the femoral head. She was managed with blood transfusion, analgesia and bed rest.

During her hospital stay, she had low grade fever reaching up to 38.5o C. Septic screen showed an increased titre for Salmonella typhi O (> 1:640), Salmonella typhi H (> 1:640) and Salmonella paratyphi O antigens (> 1:640). Salmonella typhi was isolated from both urine and stool and blood culture which was sero type D sensitive to ampicillin and cotrimoxazole.

Repeat bone scan showed sacroiliitis of the right side (Fig 2). Aspiration of right sacroiliac joint was done under CT scan guidance (Fig 3). This yielded few milliliters of turbid fluid which was later found to be positive for Salmonella typhi group D. The patient was treated with intravenous amoxicillin 4 gm daily for 4 weeks and continued on oral Ciprofloxacin 500 mg twice daily for another 2 weeks. She recovered fully and was afebrile. Repeated blood, urine and stool cultures were negative.

DISCUSSION

Salmonella infections may present with gastroenteritis, fever and bacteremia. In others, it may lead to joint disease, either directly in the form of septic arthritis or indirectly as reactive arthritis.

There are many diseases that predispose to infection with Salmonella including lymphoma, leukemia, sickle cell anaemia, acquired immune deficiency syndrome, and SLE. In fact, SLE is the most frequent underlying disease in patients with salmonella septicaemia and septic arthritis^{2,4}. Salmonella septic arthritis in non-SLE patient has been reported to affect the sacroiliac joint in one report¹⁰. However, the present case is the first reported case of Salmonella septic sacroiliitis in an SLE patient.

This increased susceptibility may be due to a number of factors which include an inherent defect of SLE patient in clearing Salmonella even without prior therapy as suggested by the concurrent presentation of SLE and Salmonella septicaemia in some reports^{6,7}. This defect may be the result of defective reticulo endothelial function, defective opsonization of Salmonella, hyposplenism and the increased risk of chronic carriage of Salmonella^{2,8,9}. Other contributing factors include the activity of the disease and the use of immunosuppressive drugs.

CONCLUSION

This report emphasises the susceptibility of SLE patient to infections and the importance of searching for it in unusual sites which may initially appear normal on both clinical and radiological examinations. It also emphasise the importance of culturing body fluids and excreta in pyrexial SLE patients and the value of isotope bone scan in such a search.

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