Yersinia arthritis with erythema nodosum

R.A. Luqmani and P.T. Dawes

Staffordshire Rheumatology Centre, Haywood Hospital, High Lane, Burslem, Stoke on Trent, Staffordshire ST6 7AG, UK.

Summary: A previously healthy female presented with erythema nodosum and arthritis with serological evidence of infection with *Yersinia enterocolitica*. Erythema nodosum following this infection has not previously been reported in Britain.

Introduction

Reactive arthritis is a rare but recognized complication of *Yersinia enterocolitica* in Britain (Sheldon & Pell, 1983). In Scandinavia erythema nodosum is also a feature of this infection in HLA B27 negative individuals (Aho, 1983). We report a patient presenting with erythema nodosum and arthritis in whom serology confirmed recent infection with *Yersinia enterocolitica*.

Case history

A 17 year old female presented with recent onset of an oligoarthritis affecting the right knee, ankles and right 2nd metacarpal joint. There was no history of eye symptoms, sexual contact or diarrhoeal illness and no relevant family history. The joint manifestations were accompanied by tender raised lumps on both shins and forearms typical of erythema nodosum. Investigations revealed a haemoglobin of 12.8 g/dl, white cell count $8.4 \times 10^9/l$, platelets $324 \times 10^9/l$ erythrocyte sedimentation rate 46 mm/h, C-reactive protein 34 mg/l, RA latex and antinuclear factor negative, ASO titre < 200 IU/l, serology for brucellosis and salmonella negative. Culture of faeces, urine and throat swab were negative. Chest X-ray was normal and there was no evidence of an erosive arthritis on hand, feet, ankle or knee radiographs. The patient was treated with bed rest, naproxen 500 mg b.d., physiotherapy, and made

an uneventful recovery. Serology for *Yersinia enterocolitica* 0:3 was raised on admission at 1:320, a convalescent titre after 5 weeks had fallen to 1:160 consistent with a recent *Yersinia* infection. The skin lesions and joint symptoms had completely resolved 6 weeks from presentation.

Discussion

Yersinia enterocolitica is a Gram negative coliform, well recognized in Northern Europe as causing a diarrhoeal illness and arthritis (Marsal *et al.*, 1981). The gastrointestinal infection may be asymptomatic and patients present with reactive arthritis (Foley & Matthews, 1984). The infection is common in Scandinavia, affecting 1 to 2% of the population (Ahvonen, 1972) and although infection is rare in Britain its incidence appears to be increasing (Morain, 1981). Diagnosis of infection can be confirmed within 2 weeks from onset of symptoms by serology when an agglutination of 1/160 or higher is accepted as evidence of recent infection (Fokey & Matthews, 1984). This case does imply that infection with this organism should be considered along with other enteric infections as causing erythema nodosum in Britain, even in the absence of gastrointestinal symptoms. This may establish the cause of erythema nodosum in some patients.

References

- AHO, K. (1983). *Yersinia* reactive arthritis. *British Journal of Rheumatology*, **22** (Suppl 2), 41.
AHVONEN, P. (1972). Human yersinosis in Finland. *Annals of Clinical Research*, **4**, 30.
FOLEY, J.A. & MATTHEWS, J.A. (1984). Reactive arthritis due to *Yersinia enterocolitica*. *Clinical Rheumatology*, **3**, 385.

- MARSAL, L., WINBLAD, S. & WOLLHEIM, F.A. (1981). *Yersinia enterocolitica* arthritis in Sweden: a four year follow-up study. *British Medical Journal*, **283**, 101.
MARAIN, C.O. (1981). Acute ileitis. *British Medical Journal*, **283**, 1075.
SHELDON, P.J. & PELL, P. (1983). *Yersinia* arthritis in the Midlands: clinical and immunological features in ten cases during 1980-1983. *British Journal of Rheumatology*, **22** (Suppl 2), 46.

Correspondence: P.T. Dawes, M.B., M.R.C.P.
Accepted: 22 October 1985