Polymyalgia rheumatica presenting as nocturnal fever of undetermined origin

Husayn Al Mahdy • Sarah Martindale
Department of Medicine, Queen Elizabeth Hospital, Stadium Road, Woolwich, London SE18 4QX, UK
Correspondence to: Husayn Al Mahdy. E-mail: pablomartinez400@hotmail.com

This article illustrates the importance of considering all the differential diagnoses of pyrexia of undetermined origin, especially inflammatory rheumatic diseases, irrespective of the ethnic origin of the person concerned.

Case report
A 61-year-old South Asian woman, who has been living in England for over a decade, presented with back pain, fever and dysuria intermittently over the past three weeks and had been prescribed several antibiotics by her general practitioner for presumed urinary tract infections. However, urine microscopy and culture prior to initiation of further antibiotics of Gentamicin and Co-Amoxiclav did not substantiate this diagnosis and the antibiotics, which were given for five days, were stopped.

She remained febrile with oral temperatures rising to 38°C most evenings at around 18:00. The fever tended to persist till the early hours of the morning. Blood cultures taken on three occasions at time of fever did not produce any microbial growth and her ESR had been persistently elevated at over 100 mm in the first hour and C-reactive protein of over 100 mg/L (normal range 0–5). In addition, urine microscopy and culture prior to initiation of further antibiotics of Gentamicin and Co-Amoxiclav did not substantiate this diagnosis and the antibiotics, which were given for five days, were stopped.

The clinical features were not diagnostic of an inflammatory arthropathy or SLE. After such extensive investigations and observations, a diagnosis of polymyalgia rheumatica was made. The woman was given a trial of a daily dose 20 mg of Prednisolone for two days and this led to the resolution of her symptoms. She was maintained on this dose of Prednisolone for a further four weeks and her ESR came down to 37 mm in the first hour but C-reactive protein came down earlier to 5 mg/L, with haemoglobin rising to 11.7 g/dL. The chest X-ray did not reveal any pulmonary lesion.

The clinical features were not diagnostic of an inflammatory arthropathy or SLE. After such extensive investigations and observations, a diagnosis of polymyalgia rheumatica was made. The woman was given a trial of a daily dose 20 mg of Prednisolone for two days and this led to the resolution of her symptoms. She was maintained on this dose of Prednisolone for a further four weeks and her ESR came down to 37 mm in the first hour but C-reactive protein came down earlier to 5 mg/L, with haemoglobin rising to 11.7 g/dL. This woman is continuing to take Prednisolone titrated with her symptoms and ESR, and remained free from joint pains when last seen.
Discussion

Polymyalgia rheumatica is a common inflammatory rheumatic disease in people over the age of 50 years of European descent. It is characterized by pain and morning stiffness in the shoulder and pelvic girdles and occasionally may affect the cervical spine. The diagnostic criteria for this disease have been described by Chiang et al. and Healey, with the latter including the criterion of rapid response to 20 mg or less of Prednisolone per day. Polymyalgia rheumatica may co-exist with giant cell arteritis but in this woman there was no evidence of this. The pathogenesis of this disease is not known but it is postulated that genetic susceptibility coupled with environmental factors may predispose to this condition. Low-grade fever may be also be a feature of the disease, but high-grade fever has not been described except in giant cell arteritis.

Our patient was South Asian in origin presenting with a total of eight weeks of nocturnal pyrexia and proximal joint pains with ESR greater than 100 mm in the first hour. Despite extensive investigations no infective cause, especially tuberculosis, could be found and no other rheumatological diagnosis could be made. However, she responded rapidly to 20 mg of Prednisolone per day.

This case demonstrates that the severity of fever and its diurnal variation does not exclude the diagnosis of polymyalgia rheumatica. In addition, the ethnicity of a person may not provide any indication as to the diagnostic group of the clinical problem facing the clinician in a multi-ethnic environment.

References

1. Salvarani C, Cantini F, Boiard L, Hunder GG. Polymyalgia rheumatica and giant-cell arteritis. N Engl J Med 2002;347:261–71
2. Chiang T-Y, Hunder GG, Ilstrup DM, Kurland LT. Polymyalgia rheumatica: a 10-year epidemiological and clinical study. Ann Intern Med 1982;97:672–80
3. Healy LA. Long term follow-up of polymyalgia rheumatica: evidence for synovitis. Semin Arthritis Rheum 1984;13:322–8
4. Salvarani C, Cantini F, Hunder GG. Polymyalgia rheumatica and giant-cell arteritis. Lancet 2008;372:234–45
5. Michet CJ, Matterson EL. Polymyalgia rheumatica. BMJ 2008;336:765–9
6. Calamia KT, Hunder GG. Giant cell arteritis (temporal arteritis) presenting as fever of undetermined origin. Arthritis Rheum 1981;24:1414–18