Lupus (2008) 17, 752–753
http://lup.sagepub.com

CONCISE REPORT

Possible familial Mediterranean fever in a Caucasian patient with systemic lupus erythematosus

BE Schreiber[1], HJ Lachmann[2] and CG Mackworth-Young[3]
[1]Department of Rheumatology, Hammersmith Hospital, Du Cane Road, London W12 0HS, England; [2]National Amyloidosis Centre, Royal Free Hospital, Rowland Hill Street, London NW3 2PF, England; and [3]Department of Rheumatology, Charing Cross Hospital, Fulham Palace Road, London W6 F, England

We report the case of a Caucasian man with systemic lupus erythematosus who had recurrent fevers and abdominal pain. He was later found to carry E148Q polymorphism of *MEFV*, the gene responsible for familial Mediterranean fever. *Lupus* (2008) **17,** 752–753.

Key words: systemic lupus erythematosus; familial Mediterranean fever; fever; serositis

Introduction

Among the many potential features of systemic lupus erythematosus (SLE) are serositis and fever. We report the case of a patient with SLE who had both. Unusually, he was subsequently found to carry a mutation in *MEFV*, the gene responsible for familial Mediterranean fever (FMF).

Case report

A 57-year-old male Caucasian presented in 1991 with a malar rash and photosensitivity. Investigations demonstrated a persistently raised ESR (50–90 mm in the first hour), normal CRP and elevated autoantibody levels: ANA 1:80, speckled pattern, anti-Ro > 1:64, anti-dsDNA 550 units/ml (normal 0–30). Anticardiolipin antibody levels were not measured at the time but were subsequently normal. He was hypocomplementaemic with 0.37 g/l C_3 (normal 0.7–1.7 g/l) and 0.04 g/l C_4 (normal 0.16–0.54 g/l), and had mild hypergammaglobulinaemia. There was mild anaemia (Hb 12.0 g/dl), modest leucopenia (WBC between 2.0 and 4.0×10^9/l) and mild thrombocytopenia (platelets 100–140 $\times 10^9$/l). A diagnosis of SLE was made.

In 1994, his symptoms worsened, with severe arthralgia. He was started on hydroxychloroquine with alternate-day low-dose aspirin. His symptoms stabilized.

In 1998, he developed intermittent abdominal pain, which began in the periumbilical area and radiated to the right hypochondrium. These attacks were characterized by severe discomfort for 4–6 hours, gradually settling over a few days. They were thought to represent episodes of abdominal serositis, possibly lupus related. In 2001, he had a normal colonoscopy and colonic biopsy.

In June 2002, he reported recurrent low-grade fevers, which had increased in frequency to twice a month. In retrospect, he had had intermittent fevers for over 25 years. He generally found ibuprofen very effective.

In 2005, he underwent appendicectomy for perforated appendix. Postoperatively, he developed bilateral pleural effusions and a pelvic collection, which was drained under ultrasound guidance. The fluid was straw coloured, and microscopy of the fluid showed scanty white blood cells. No organisms were grown in culture.

Subsequent testing showed that he was heterozygous for the E148Q polymorphism of *MEFV*, the gene responsible for FMF. He was started on regular colchicine (500 μg daily). Over the next 6 months, he had only one episode of mild fever and was free of abdominal pain.

Discussion

SLE is associated with several causes of abdominal pain, and peritonitis is common, but is not usually

Correspondence to: CG Mackworth-Young, Department of Rheumatology, Charing Cross Hospital, Fulham Palace Road, London W6 F, England. Email: h.lachmann@medsch.ucl.ac.uk
Received 2 December 2007; accepted 15 January 2008

 10.1177/0961203308089449

periodic.[1] FMF is an autosomal recessive disorder characterized by sporadic paroxysmal attacks of fever and serosal inflammation.[2] It has been described most frequently in ethnic groups from the Eastern Mediterranean, but it occurs in other ethnic groups also. We are not aware of any reported cases of genetically confirmed FMF in patients with lupus in the English literature. Indeed, there is some speculation that FMF may protect against SLE.[3] The pyrin E148Q mutation occurs in 20% of the world population but is very uncommon in Northern European Caucasians such as our patient. On its own, *MEFV* E148Q is not adequate to cause FMF, but it can contribute to an inflammatory phenotype.[4] A number of these patients respond well to long-term colchicine prophylaxis.

The clinical features of our case were not suggestive of antiphospholipid syndrome. The abdominal pain may have been due to lupus serositis or to an FMF-related syndrome, although the last episode was clearly caused by appendicitis. The partial response of the fevers to low-dose colchicine suggests that they were due, at least in part, to disease associated with his MEFV mutation. Our case illustrates the difficulty in diagnosing the cause of recurrent fevers in patients with lupus and the need to consider alternative diagnoses.

References

1 Sultan, SM, Ioannou, Y, Isenberg, DA. A review of gastrointestinal manifestations of systemic lupus erythematosus. *Rheumatology (Oxford)* 1999; **38**: 917–932.

2 Sohar, E, Gafni, J, Pras, M, Heller, H. Familial Mediterranean fever. A survey of 470 cases and review of the literature. *Am J Med* 1967; **43**: 227.

3 Ozen, S, Bakkaloglu, A. C reactive protein: protecting from lupus in familial Mediterranean fever. *Ann Rheum Dis.* 2005; **64**: 786–787.

4 Booth, DR, Lachmann, HJ, Gillmore, JD, Booth, SE, Hawkins, PN. Prevalence and significance of the familial Mediterranean fever gene mutation encoding pyrin Q148. *QJM* 2001; **94**: 527–531.