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These results support and extend the observations of Gharavi et al. They provide further evidence that anti-dsDNA and antcardiolipin antibodies are to some extent discrete populations in the patients with principally IgG1 and IgG3 antcardiolipin binding—that is, the principal subclasses of IgG anti-dsDNA, showed no DNA binding.

These results also emphasise the heterogeneity of antcardiolipin/antiphospholipid antibodies: patients with and without SLE show different affinities for different phospholipids, different effects on in vitro coagulation studies, and have different clinical correlations. It would also seem that they show different IgG subclass distribution. We feel it is unlikely that the difference between our groups reflects either the marked sex difference or the higher total IgG antcardiolipin in the SLE groups: the subclass ratios within each group were similar for both high and low total IgG antcardiolipin and for both men and women. Data from our laboratory suggest that the IgG subclass distribution of these sera is the same for the binding of other phospholipids with widely differing charge: phosphatidylserine, phosphatidylinositol, and phosphatidylethanolamine (Snowden et al, unpublished data).

Regional Immunology Service,
St Mary’s Hospital,
Hathersage Road,
Manchester M3 0JH

References

Lyme arthritis in Spain

Sir, We have been interested in the increasing recognition of Lyme arthritis in Europe reported by Huaux et al. The present case is the first described in Spain and has the peculiarity that synovial swelling recovered rapidly with ceftriaxone sodium after an unsuccessful 10 day penicillin regimen.

In October 1986 a 62 year old man had a cutaneous eruption, which retrospectively was compatible with erythema chronicon migrans. In January 1987 he was admitted to the hospital because of a two month history of mild fever, right lower abdominal pain, and generalised polyarticular pain followed by right knee synovial swelling and weight loss. His epidemiological antecedents were unremarkable except for his job as a rag picker.

Physical examination showed fever of 38°C and signs of active synovitis in the right knee. Laboratory tests disclosed a sedimentation rate of 104 mm after the first hour, white blood cell count of 12×10⁹/l with normal differential count, and platelet count of 293×10⁹/l. Titres of rheumatoid factor and antinuclear antibodies as well as cryoglobulins and complement levels were normal. Total serum protein level was 78 g/l, IgG 2210 g/l, IgM 610 g/l, and IgA 220 g/l (normal range: IgG 639–1349 g/l; IgM 56–352 g/l; IgA 70–312 g/l). The IgM and IgG circulating immune complexes were 80 and 222 mg/l respectively (normal range: IgM 10–93 mg/l; IgG 14–147 mg/l). Lumbar puncture yielded a normal cerebrospinal fluid. Examination of the synovial fluid showed 3500 leukocytes with 70% neutrophils. Cultures of the blood, cerebrospinal fluid, and synovial fluid were negative. Serological tests for Yersinia enterocolitica, Treponema pallidum, Brucella melitensis, Coxiella burnetii, Toxoplasma gondii, Epstein-Barr virus, cytomegalovirus, and hepatitis B virus were negative. The tuberculin skin test (5 TU of PDD-T) was positive (10×10 mm), but cultural identification of Mycobacterium tuberculosis in Löwenstein-Jensen medium from sputum, cerebrospinal fluid, and synovial biopsy tissue was negative. The following examinations gave normal results: chest roentgenogram, electrocardiogram, barium swallow, gastrointestinal endoscopy, abdominal computed tomography scan, kidney arteriogram, electromyography, and biopsies of the temporal artery, muscle, liver, and synovial membrane. Serum antibodies against Borrelia burgdorferi detected by indirect immunofluorescence were positive at dilutions of 1/32, 1/128, and 1/256 at three week intervals. The synovial fluid titre was positive at 1/256. The borrelia strain was supplied by the Institute Pasteur, Paris. Specific IgM antibodies in either serum or synovial fluid were not tested. The patient was treated with intravenous penicillin (20 MU/day for 10 days) and recovered completely except for synovial swelling, which disappeared after administration of intramuscular ceftriaxone sodium (2 g/day for 14 days). The interval between treatment with penicillin and administration of ceftriaxone sodium was three months.

The clinical spectrum of Lyme disease ranges from asymptomatic to protean manifestations. Antigenic variations among borrelia isolates may account for differences in the clinical expression of the disease. Arthritis seems to be less severe and less frequent in Europe than in the USA. Borrelia's vectors are Ixodes dammini, I pacificus, and I scapularis in America and I ricinus in Europe, but other currently unrecognised vectors will probably be identified in the future. In epidemiological surveys of Mediterranean spotted fever 1525 ticks were collected from our hospital catchment area in the following proportions: Rhipicephalus sanguineus 82.4%, R turanicus 14.4%, R pusillus 3.2%, and R bursa 3.2%, but no I ricinus were found. We do not know the particular vector in the case here presented. The patient is a resident of the county Vallès Occidental (25 miles west of Barcelona city) with no history of journeys in Spain or abroad.

Clinical and epidemiological features of Lyme disease in the Mediterranean countries are poorly known because few cases have so far been reported. The present autochthonous case illustrates the usefulness of ceftriaxone sodium when response to classical intravenous penicillin treatment is not achieved.
Department of Internal Medicine, Hospital de Sabadell, Barcelona, Spain

A Nogueras, M Pouplana, J Galbe, F Segura

References


Correspondence

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Similarity of the genetic background in rheumatic diseases between northern Italian and Israeli patients

Sir, We read with interest the paper by Tishler et al on the association between HLA-B35 and sodium aurothiiosulphate related mucocutaneous toxicity in Israeli rheumatoid patients and would like to comment on it.

Firstly, we have observed a low degree of association between B35 and dermatitis in rheumatoid patients treated with sodium aurothiiosulphate, but a stronger one was found in those who had received tiopronin as a remission inducing drug. Secondly, in our region of northern Italy we are dealing with a rheumatoid population in which the level of DR4 is similar to that in controls (DR4: 15-27% in rheumatoid arthritis vs 12-3% in controls). Similar findings were reported by Brautbar et al. Only when the patients were divided into those with and those without extra-articular manifestations did we observe some associations—namely, between DR3 and extra-articular features and between DR1 and arthritis without extra-articular disease. The lack of any significant association between DR4 and rheumatoid arthritis is maintained, though a comparison of the Israeli and Italian control series shows a different prevalence of three DR antigens—namely, DR2, DR3, and DR4 (Table 1).

Further data suggest a similarity between the two populations. As described in Israeli patients with Reiter's disease we also found a lower than expected prevalence of DR2 in 17 patients typed so far. This prevalence was 29-4%, which compares with 29% reported by Ben-Cherit et al.

We recently observed that patients with systemic lupus erythematosus also differ immunogenetically from several populations reported in published work as no relation has been found with DR2 or DR3. A strong association was observed, however, between DR7 and anticardiolipin antibodies. It would be very interesting to know whether in Israeli patients with systemic lupus erythematosus such an association also holds true.

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Rheumatic Diseases Unit,

GIAN FRANCO FERRACIOLI
University Hospital of Parma,

GIOVANNI BIANCHI
Italy

Dept of Internal Medicine and

MARIO SAVI
Nephrology,
University Hospital of Parma,

Italy

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Table 1 Prevalence of DR antigens in Israeli and Italian controls. *Values are percentages

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<th>DR1</th>
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*Data are from references 3 and 4.
Lyme arthritis in Spain.

A Nogueras, M Pouplana, J Galbe and F Segura

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