

## LETTERS TO THE EDITOR

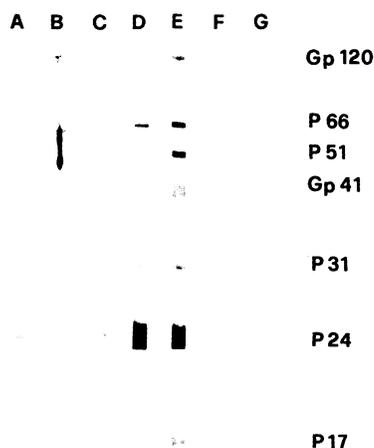
### Antibodies to retroviral proteins in Sjögren's syndrome

Sir: Recently, increased frequency of antibodies to retroviral proteins has been found in serum samples from patients with primary Sjögren's syndrome. Talal *et al* reported the presence of antibodies to p24 gag protein of HIV-1 in serum samples of 14 of 47 patients (30%) with primary Sjögren's syndrome.<sup>1</sup> Moreover, they found that two samples also reacted with p17 protein. Coll *et al* similarly reported high prevalence (33%) of antibodies to p24 in 21 patients with primary Sjögren's syndrome.<sup>2</sup> In addition, they found in the seven positive samples reactivity with other HIV-1 proteins—namely, with p68 (four samples), with p55 (six), and with p18 (two). No other studies have hitherto confirmed these interesting results.

The aim of our study was to verify these findings in northern Italian patients with primary Sjögren's syndrome. We evaluated 48 outpatients with primary Sjögren's syndrome followed up at two institutions (Clinical Immunology, Brescia and Clinical Rheumatology, Ferrara). All the patients were female (mean age 53.4 years, range 21-80). None was in a risk group for AIDS. Diagnosis of Sjögren's syndrome was made according to established criteria.<sup>3</sup> No patient fulfilled American Rheumatism Association criteria for diagnosis of associated classical connective tissue disease.

Antinuclear antibodies were detected by indirect immunofluorescence using HEp-2 cells as a substrate.

Antibodies to extractable nuclear antigens were detected by counterimmunoelectrophoresis according to Bernstein *et al*<sup>4</sup> using both rabbit thymus acetone powder and human spleen extract.



Strips A, B, and C=patients with Sjögren's syndrome; strips D and E=patients positive for antibody to HIV; strips F and G=negative controls.

Western blot assay for HIV-1 was performed as follows. Detergent lysates of HIV were fractionated by sodium dodecyl sulphate-polyacrylamide gel electrophoresis. Proteins were electrophoretically transferred to nitrocellulose sheets according to the method of Towbin *et al*.<sup>5</sup> Strips were then incubated overnight in individual test tubes together with 2.5 ml of blocking medium. Immunoglobulins bound to HIV proteins were visualised by goat antihuman IgG conjugated with biotin, avidin conjugated horseradish peroxidase, and an enzyme substrate (4-chloro-1-naphthol).

Western blot assay for HTLV-1 was performed by a commercially available kit (Cambridge Biotech Corporation, 365 Plantation Street, Worcester, MA 01605, USA).

Forty patients (83%) had antinuclear antibodies at indirect immunofluorescence examination. Thirty four (71%) had antibodies to Ro (six patients) or to Ro and La antigens (28 patients). In the Western blot assay serum samples from three patients showed strong reactivity with p24 gag protein of HIV-1 (figure). No additional reactivity with other HIV-1 proteins was detected. Immunoblot analysis of the three samples positive against HTLV-1 proteins showed no reactivity.

The three patients were women, aged respectively 62, 68, and 80 years, and were all negative for antibodies to Ro and La antigens. Our study has shown the presence of antibodies to p24 in three of 48 patients (6%) with a prevalence much lower than in previous studies<sup>1,2</sup> but still much higher than in normal adult subjects from the same geographical area (<0.5% in 12 000 subjects). Of particular interest is our finding that the three patients with antibodies to the p24 protein were all negative for antibodies to Ro and La antigens, with a prevalence of anti-p24 positivity of 21% (three out of 14 patients) in this subset of Sjögren's syndrome. This finding is in agreement with the results of the study of Talal *et al*,<sup>1</sup> whose patients with anti-p24 reactivity had in common a paucity of antibodies to Ro and La. No data are available as to the patients studied by Coll *et al*.<sup>2</sup> The lower prevalence of anti-p24 in our patients than in those studied by Talal *et al*<sup>1</sup> might thus be explained on the basis of the different proportion, respectively 29% and 55%, of patients lacking antibodies to Ro and La in the two case series.

The presence of isolated reactivity with the p24 protein is not consistent with infection with classic HIV-1. It may reflect a cross reaction against a different retrovirus. In this context a recent report by Brookes *et al*<sup>6</sup> may be of interest which showed that antibodies to retroviral gag cross react with endogenous retroviral sequences, such as HRES-1. In agreement with the results of Talal *et al*<sup>1</sup> we found no reactivity with HTLV-1 proteins.

In conclusion, our data, while confirming previous reports<sup>1,2</sup> of increased frequency of anti-p24 gag protein reactivity in patients with primary Sjögren's syndrome, point to a restriction of this finding to the subset of patients lacking antibodies to Ro and La.

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- 1 Talal N, Dauphinée M J, Dang H, Alexander S S, Hart D J, Garry F. Detection of serum antibodies to retroviral proteins in patients with primary Sjögren's syndrome (auto-immune exocrinopathy). *Arthritis Rheum* 1990; **33**: 774-81.
- 2 Coll J, Gutierrez-Cabollada J, Yazbeck H, Tomas S, Faus S. Detection of serum antibodies to core proteins of human immunodeficiency virus in primary and secondary Sjögren's syndrome. *Clin Exp Rheumatol* 1991; **9**: 336.
- 3 Fox R I, Robinson C A, Curd J G, Kozin F, Howell F V. Sjögren's syndrome. Proposed criteria for classification. *Arthritis Rheum* 1986; **29**: 577-85.
- 4 Bernstein R M, Bunn C C, Hughes G R V. Identification of antibodies to acidic antigens by counterimmunoelectrophoresis. *Ann Rheum Dis* 1982; **41**: 554-5.
- 5 Towbin H, Staehelin T, Gordon J. Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets: procedure and some applications. *Proc Natl Acad Sci USA* 1979; **76**: 50-4.
- 6 Brookes S M, Pandolfino Y A, Mitchell T J, *et al*. The immune response to and expression of cross-reactive retroviral gag sequences in autoimmune disease. *Br J Rheumatol* 1992; **31**: 735-42.

### Insufficiency fractures of the sacrum

Insufficiency fractures, as defined by Pentecost *et al*,<sup>1</sup> occur when the elastic strength of bone is not sufficient to withstand normal physiological stresses. Most commonly, reduction of bone strength is due to osteoporosis, but can be secondary to a variety of metabolic bone diseases. Frequently recognised sites of fracture include the thoracic and lumbar vertebral bodies, femoral neck, distal forearm bones and, less commonly, the pubic rami. Insufficiency fracture of the osteoporotic sacrum was first described in 1982 by Lourie,<sup>2</sup> and although further cases have been reported,<sup>3-9</sup> they are thought to be uncommon. They occur primarily in elderly women, either spontaneously or after minimal trauma, and present with low back pain with or without radiation to the leg.

We report a retrospective analysis of a series of 12 consecutive sacral insufficiency fractures diagnosed at Royal Newcastle Hospital over a four year period. The table outlines individual patient details.

In keeping with other series most of our cases occurred in elderly women, though this series includes two elderly men and three women under the age of 65. In all cases, however, there was evident osteoporosis. Characteristically, sacral fracture occurred following a fall onto the buttocks. This results in forward movement of the sacrum relative to a stationary ilium, and vertical buckling of the osteoporotic ala. In other cases trauma was minimal or not recalled. Recent hip replacement had been performed in three cases. This has been reported as an independent risk for sacral fracture.<sup>9</sup>