

agonists to the management of prostatic cancer but emphasise the importance of further investigation into their combined use with antiandrogens.

We thank Anne Buxton, who helped to compile the data.

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## Predominant wrist disease in rheumatoid arthritis associated with high concentration of IgA rheumatoid factor

Both the severity of radiological progression and the pattern of joint disease in rheumatoid arthritis are extremely variable. In a series of patients studied prospectively those with high concentrations of IgA rheumatoid factor in their serum showed a predominance of erosions affecting the wrist.<sup>1</sup> We have therefore studied a larger number of patients to test the hypothesis that such an association exists.

### Patients, methods, and results

We studied 46 patients with definite or classical rheumatoid arthritis. Twenty three had raised values of IgA rheumatoid factor in their serum and in the rest these values were normal. Nineteen patients in the first group and 21 in the second had raised IgM rheumatoid factor concentrations. The group with high IgA rheumatoid factor values consisted of six men and 17 women with a mean age of 56.5 years (range 34-78) and a mean duration of disease of 8.7 years (range 2-24), and the group with normal IgA rheumatoid factor values comprised eight men and 15 women with a mean age of 54.6 years (range 35-74) and a mean duration of disease of 7.6 years (range 2-25). Rheumatoid factor was measured by an enzyme linked immunosorbent assay.<sup>2</sup> Radiographs of hand and wrist were assessed using the defect score described by Sharpe *et al.*,<sup>3</sup> the scores for erosions in wrist and hand (metacarpophalangeal and proximal and distal interphalangeal joints) being recorded separately. The number of hand erosions was subtracted from the number of wrist erosions to give a score for each patient. Although a ratio of hand to wrist erosions would have been a more satisfactory method of assessment, some patients who had extensive erosions in the wrist had none in the hand. The scores in the two groups were compared by Wilcoxon's rank sum test.

The patients with high IgA rheumatoid factor values had a mean score of 7.1 (range -8 to 36), while the patients with normal values of IgA rheumatoid factor had an average score of -0.4 (range -32 to 18). This difference was statistically significant ( $p < 0.05$ ).

### Comment

The aetiology of rheumatoid arthritis remains unknown but it has been suggested that the disease may represent several disorders with different immunogenetic backgrounds and environmental trigger factors. This possible heterogeneity makes the search for aetiological factors very

difficult. It therefore seems reasonable to look for subgroups of disease and that studying these separately may help elucidate the problem. IgA rheumatoid factor has already been associated with a poor prognosis in rheumatoid arthritis.<sup>1</sup> Finding an association with a particular radiological pattern lends further support to the view that patients with rheumatoid arthritis and high values of IgA rheumatoid factor may represent a subgroup of the disease. This association has been shown despite our patients having established disease, for which several had received "specific" or disease modifying agents (gold salts, penicillamine, steroids) which lower IgA rheumatoid factor values (unpublished observations). Burns and Calin have reported a different radiological pattern in patients with seronegative rheumatoid arthritis. (Some patients who are conventionally seronegative have high values of IgA rheumatoid factor in their serum.) They interpreted their findings as suggesting that seronegative rheumatoid arthritis has a different pathological mechanism from seropositive rheumatoid arthritis.<sup>4</sup> Other studies categorising the radiological progression of rheumatoid arthritis have noted an association between rheumatoid factor titre and severity of erosive disease but have not commented on the pattern of joint erosion.<sup>3,5</sup>

Though it is unclear why IgA rheumatoid factor should be a marker for a disease subset of rheumatoid arthritis, we believe that IgA rheumatoid factor deserves closer examination in patients with rheumatoid arthritis.

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## The neglected hospital wheelchair

Hospital wheelchairs are in constant use and have to withstand considerable wear. We observed that many were in a poor state of repair and that patients had sustained injuries owing to faulty wheelchairs. A previous study identified some faults in hospital wheelchairs,<sup>1</sup> but the prevalence and implications of such faults have not been assessed. We examined this problem.

### Methods and results

We inspected all the transit and self propelled wheelchairs in a geriatric hospital (215 beds) and all those in the medical wing of a teaching hospital (204 beds). The type of tyre (pneumatic or solid) was recorded, and the backrest, seat, armrests, and footrest plates were examined for defects. The pneumatic tyres were inspected for wear and state of inflation. They were recorded as worn if the central part of the tread was indistinct, soft if there was insufficient air to support a person sitting in the wheelchair and excessive bulging of the tyre occurred, and deflated if there was clearly no air in the inner tube. The deflated tyres were pumped up, their valves tested, and the tyres later re-examined to determine if a puncture was present. Steering and brakes were tested with a person sitting in the wheelchair. Each brake was applied separately and recorded as defective if the wheelchair could still be moved easily.

To evaluate injuries to patients caused by defective wheelchairs we prospectively investigated for two months all accidents on our geriatric unit in which wheelchairs played a part and that required the completion of a hospital accident report.

There were 93 wheelchairs in the geriatric hospital and 30 in the medical wing. Only 21 and seven, respectively, were free from faults. The table gives details of the faults found. Wheelchair arms were termed dangerous when their foam covering had been torn away, exposing the sharp ends of the bolts inside. Spikes on the footrest plates were sharp vertical projections that remained on the