antigen was detected as long as three and 17 years after yersinia infection,⁷ suggesting that the microbial structures can persist in the tissues. The antigens are found in mesenteric and cervical lymph nodes and in the skin,¹¹ and, during the acute phase of infection, in peripheral blood cells of almost every patient, including patients who will not develop reactive arthritis.¹² Thus the presence of antigens in the blood provides an explanation for extensive antigen dissemination, but not for the development of reactive arthritis and other clinically significant extraintestinal manifestations.

Possibly, extraintestinal symptoms derive from inflammatory hyperreactivity of the patient to the antigenic stimulus. It has been reported that neutrophils of HLA-B27 positive subjects without a history of yersinia infection and of patients with previous yersinia reactive arthritis show enhanced neutrophil migration in response to a chemotactic stimulus *in vitro*³ and *in vivo*,¹³ as do patients with ankylosing spondylitis, at least *in vitro*.¹⁴ Furthermore, neutrophils from patients who have a history of severe acute yersinia triggered reactive arthritis,¹⁵ or with sequelae,⁴ show increased generation of oxygen radicals *in vitro*. NAP-1/IL-8 stimulates neutrophil chemotaxis and oxygen radical production⁵ and might thereby contribute to the neutrophil hyperactivity.

In conclusion, the results show that both control and lipopolysaccharide induced NAP-1/IL-8 production by monocytes was similar in subjects with past yersinia arthritis or enteritis and unaffected subjects, and did not differ between HLA-B27 positive and negative subjects. This seems to rule out an aberrant function of monocytes, at least for the synthesis and release of NAP-1/IL-8, one of their major products, in the triggering of reactive arthritis.

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Hand radiography: an indicator of upper cervical disease in rheumatoid arthritis

Sir: One of the most dangerous complications of rheumatoid arthritis is upper cervical disease, which can cause sudden deaths and serious neurological problems. In previous surveys, reported prevalences of atlantoaxial subluxations range between 19 and 71% according to the patient selection and radiological techniques used.¹⁻³ Although direct radiographic investigations can show atlantoaxial subluxations, computed tomography (CT) and magnetic resonance imaging are the best procedures for eliciting the myelopathy and bone soft tissue pathologies in this region.⁴⁻⁷ As these methods are expensive, however, the question then has to be asked: which patients with rheumatoid arthritis should be evaluated by CT or magnetic resonance imaging?

Conlon *et al* were the first group reporting a relation between atlantoaxial subluxations and severe peripheral joint destruction.² Later, reports from Stevens *et al*¹ and Rasker and Cosh³ supported this view. We attempted to determine if the CT findings correlate with hand radiographic findings or not. We studied 40 patients chosen randomly from 138 outpatients at Ankara Hospital, diagnosed as having rheumatoid arthritis according to the 1987 revised criteria of the American Rheumatism Association.⁸ Anteroposterior and lateral radiographs were obtained and then we carried out CT of the craniocervical junction in the axial and coronal planes with the patient's neck in maximum flexion and neutral position by using a third generation scanner. We noticed not only atlantoaxial subluxations but also erosions of the odontoid process or atlas arcus, thickness of the ligaments, distension of the synovial cavities, and ligament ruptures.

Of the 40 patients studied, 12 had completely normal or slightly abnormal (periarticular soft tissue swelling, periarticular osteoporosis, slight joint space narrowing) hand radiographs. In this group there was no evidence of upper cervical disease or atlantoaxial subluxations in CT scans, except in one patient who had a slightly thickened transverse ligament. In the remaining group of 28 patients, who had erosions and marked joint space narrowing in hand radiographs, we found CT abnormalities of all kinds in 25 and atlantoaxial subluxations in 19 patients. As expected, atlantoaxial subluxations were associated with severe and mutilating abnormalities in the hand radiographs. We suggest that if the hand radiographs are normal, upper cervical spine disease should not be expected in rheumatoid arthritis and there is no need for sophisticated examination of this region.

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Positive antinuclear antibodies in malignancies

Sir: I read with interest the recent case report of a patient with Raynaud's phenomenon and positive antinuclear antibodies in a malignancy.¹ I would like to report two additional cases of malignancies, which were associated with Raynaud's phenomenon and a high titre of antinuclear antibodies, and make some comments on the subject.

CASE 1

A 61 year old man presented for rheumatology evaluation with a six month history of arthralgias in both hands and a six week history of severe Raynaud's phenomenon. Eight months earlier he had been admitted to hospital because of hemiparesis of his left arm and leg, which lasted a couple of days with fever of 39.5°C. He was checked thoroughly in a neurological and a medical clinic, but no underlying cause of the prolonged neurological deficit and the fever was found. Finally, he was suspected to have an unknown vasculitis and given high dose steroids, which relieved his symptoms. Antinuclear antibodies were negative at that time. When he was referred to

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