negative by all conventional assays. When the sera of these patients was chromatographed on Sephadex G-200 columns the eluted void volume peaks, containing predominantly IgM, possessed high titre RF activity detectable by latex agglutination, anti-CD Ripley, FII tanned cell and sensitized sheep cell tests. *In vitro* inhibition studies indicated that the RF in the whole serum was totally masked by circulating excess denatured IgG or by other, unknown, serum factors.

The patient demonstrated here might likewise prove to have hidden RF and her serum warranted further study.

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Addendum (7.5.70): She later returned with Raynaud's phenomenon of one month's duration. Exposure to the refrigerator in her provisions shop made her fingers first dead white for 5–10 minutes, then blue with little pain. We found blackish-blue pulp spaces with multiple small ulcers and numerous splinter hæmorrhages. Conservative treatment and inosital nicotinate 1 g t.d.s. gave complete recovery. This development adds weight to our diagnosis of RA.

Ankylosing Spondylitis and Rheumatoid Arthritis

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Mr W F, aged 80

History: Presented in 1960 with pain and swelling of the hands. Later both wrists, shoulders, knees, ankles and feet were affected. Past history of bilateral 'sciatica' (probably sacroiliitis) at age 25, pain in the neck for many years, and iritis since 1946. No history of venereal disease, dysentery, or psoriasis.

On examination: Typical rheumatoid changes in hands with ulnar deviation and swan-neck deformities of the fingers. Left olecranon bursitis and subcutaneous nodules were noted. There was a marked limitation of spinal movement (30 degrees by spondylometry; normally over 60 degrees at this age).

Rose-Waaler test was positive (1/32), and X-rays of the hands showed typical changes of rheumatoid arthritis with periarticular porosis and erosions. X-rays of the pelvis showed obliteration of both sacroiliac joints; in the spine there were typical changes of ankylosing spondylitis with calcification of spinal ligaments.

Comment

This case records the rare association of ankylosing spondylitis and a peripheral arthritis diagnosed as rheumatoid on the basis of typical deformities, nodules, positive serology and characteristic X-ray changes. Rosenthal *et al.* (1968) reported a similar case in which a rheumatoid-like arthritis developed in an elderly man with long-standing ankylosing spondylitis. They reviewed the literature and found only three cases of ankylosing spondylitis accompanied by subcutaneous nodules.

Ankylosing spondylitis and rheumatoid arthritis are usually readily distinguished on the basis of sex incidence, pattern of joint involvement, associated clinical features, laboratory tests and X-rays. Though peripheral joints may be involved in ankylosing spondylitis, hand involvement is uncommon (Wilkinson & Bywaters 1958). Even in advanced rheumatoid arthritis, spinal mobility is preserved, and when spinal involvement does occur, it is the cervical spine which is affected (Sharp *et al.* 1958). The changes are radiologically distinct and calcification of ligaments does not occur. Sacroiliac changes are a feature of ankylosing spondylitis but are not common in rheumatoid arthritis, occurring mainly in long-standing cases (Dixon & Lience 1961). Rheumatoid nodules have only occasionally been described in ankylosing spondylitis. Iritis, on the other hand, is associated with ankylosing spondylitis but not with rheumatoid arthritis (Hart 1955, Stanworth & Sharp 1956). The Rose-Waaler test is no more frequently positive in ankylosing spondylitis than in the normal population. Though this test is more commonly positive in normal elderly people, its association with typical clinical and radiological features in this case strongly supports the diagnosis of rheumatoid arthritis. The diagnostic criteria, such as those of the American Rheumatism Association, cannot be used for cases in which two diseases with manifestations in common co-exist.

On the basis of the known incidence of the diseases in the population (Lawrence 1963), calculation suggests that the incidence in men of rheumatoid arthritis, ankylosing spondylitis, and both diseases should be approximately 125 : 25 : 1. The rarity of recorded cases may reflect past diagnostic confusion, and such cases could appropriately have been labelled 'rheumatoid spondylitis'. A normal incidence of one disease in patients suffering from another is important evidence of their separate identity.

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