CLINICAL REPORTS

Bilateral retinal detachment in a case of Reiter's disease

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Summary

A patient is described who developed co-existent Reiter's disease and bilateral non-traumatic retinal detachment. Although numerous ophthalmological disorders are associated with Reiter's disease and HLA-B27, to our knowledge this is the first report of co-existent retinal detachment. Although this relationship may be fortuitous, there are a number of immunological mechanisms common to both entities. Retinal detachment, unlike bilateral conjunctivitis and acute anterior uveitis, may be clinically asymptomatic and its sequelae prevented by appropriate ophthalmological assessment.

KEY WORDS: Reiter's disease, retinal detachment, HLA-B27.

Introduction

Hans Reiter described the classic triad of co-existent urethritis, conjunctivitis and polyarthritis (Reiter, 1916). Recently this syndrome has been associated with the HLA-B27 antigen and found to include mucocutaneous eruptions, enthesopathy, spinal arthropathy and inflammatory ophthalmological diseases. The latter includes most commonly, inflammation of the anterior uveal tract (Calin, 1977). To our knowledge, retinal detachment has not been previously reported in association with Reiter's syndrome complicated by non-traumatic rhegmatogenous retinal detachment.

Case report

A 39-year-old white male presented with acute arthritis of both ankles and subtalar joints. Three months before the onset of arthritis, he had had

bilateral conjunctivitis. He had also noted urethral discharge and dysuria and had developed a penile rash at the onset of the arthritis. He had no previous history of inflammatory bowel disease, diarrhoea, arthritis, or other extra-articular features associated with Reiter's disease. Specifically he had no visual disturbance.

Physical examination revealed no evidence of acute conjunctivitis. His cardiovascular and respiratory systems were normal with no evidence of aortic insufficiency. He had marked swelling and tenderness in both ankles with Achilles tendonitis of the left ankle. The metatarsophalangeal joints were also tender and he had a small effusion involving his right knee. He had a moist, erythematous, well-circumscribed plaque-like lesion involving his penis diagnosed by a consultant dermatologist as balanitis circinata. He had no other mucocutaneous or nail abnormalities.

He was referred for routine ophthalmological assessment where visual acuity was found to be 20/30 OD and 20/25 OS. Slit lamp examination revealed bilateral vitreous degeneration and, in the fundi, bilateral multiple identically placed peripheral retinal holes associated with symmetrical retinal detachment in the upper and temporal quadrants.

His haemoglobin was 12.7 g/dl, erythrocyte sedimentation rate (ESR) 59 mm/hr. His white blood cell count, differential, serum electrolytes, SMA-12, and serum complement levels were all normal. Urinalysis was negative. The anti-nuclear antibody, rheumatoid factor, Widal test, as well as serological tests for *Yersinia* were negative. Urethral swab cultures revealed no evidence of *Chlamydia* or *Neisseria* species. Tissue typing for HLA antigens was positive for A1, B2, B27, B15, Cw1 and Cw3. Chest and joint X-rays were normal.

The patient was treated for his arthritis with a combination of aspirin and indomethacin at appro-

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appropriate dosage levels. He subsequently improved and underwent scleral implants inferiorly and cryoretinopexy (with subretinal fluid drainage) in the superior quadrants bilaterally. Follow-up examination confirmed the successful anatomical re-apposition of the retinas of both eyes.

Discussion

The aetiology of Reiter's disease is still unknown. Although associations with infectious agents such as *Yersinia*, *Salmonella* and *Shigella* have been well described, the occurrence of Reiter's disease in the absence of antecedent infectious diseases is common (Kousa, 1978). Immune mediated mechanisms may play a role in both infectious and non-infectious cases and may relate to the HLA-B27 antigen. Immune complex disease and cell mediated mechanisms have been postulated to explain some of the clinical features of Reiter's disease including the inflammatory eye disorders (Laurent, 1978; Yates *et al.*, 1975; Rosenbaum *et al.*, 1981).

The finding of bilateral retinal separation in our HLA-B27 positive patient with clinical Reiter's disease may not represent a cause and effect relationship. However, its co-existent occurrence in this particular immunological milieu leads naturally to speculation on the significance of an association.

Retinal detachment may follow both systemic and infectious diseases including diabetes mellitus, histoplasmosis, herpes and streptococcal infections (Hutton, Bernstein and Fuller, 1980; Schlaegel *et al.*, 1968; Nahmias and Hagler, 1972; Meyers and Vasil, 1980). Immunological mechanisms have been cited as contributing factors of non-traumatic varieties of retinal detachment syndromes; in particular the high incidence of HLA-B12 in patients with rhegmatogenous retinal detachment (Bertrams, 1978), and the interference of cell-mediated immunity in similar patients (Brinkman and Broekhuysse, 1978; BenEzra, 1978; Ussmann, Lazarides and Ryan, 1981).

Retinal detachment, unlike acute anterior uveitis, is clinically silent in 43% of patients affected (More and Eagle, 1975). If there is a relationship between HLA-B27 positive Reiter's disease and non-traumatic retinal detachment, then routine ophthalmological assessment may be important to prevent progressive visual impairment and/or blindness.

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