SHORT REPORTS

Arthritis and HLA-B27 in Papua New Guinea

Visitors to the hospitals of Papua New Guinea are often surprised by the many beds occupied by young men with an asymmetrical arthritis, predominantly affecting the legs. Scrutiny of their notes often elicits the enigmatic term "tropical arthritis." Such patients have been the subject of several studies. Maddocks came down firmly in favour of Reiter's disease as the diagnosis in most of these cases.¹ A later study from Goroka Base Hospital found no extra-articular manifestations of Reiter's disease and concluded that the disease was a distinctive type of arthritis of unknown aetiology.² Subsequently Brewerton *et al* described a close link between HLA-B27 and Reiter's disease.³ HLA studies in patients with arthritis in Papua New Guinea have not previously been published.

Patients, methods, and results

We studied 64 patients with arthritis, who presented to the physician (JER) at Goroka Base Hospital between October 1984 and March 1985. During this period only four other patients with arthritis were seen (two with gout, one with osteoarthritis, and one with rheumatic fever). All patients were examined by JER. Sixty two were of highland origin and two were from the coast. Histocompatibility testing was done by the procedure outlined by Bhatia *et al*.⁴ The frequency of HLA antigens in the patients was compared with that in 128 Papua New Guinean blood donors matched for age, sex, and province of origin (two controls per patient).

HLA-B27 was found in 45 (70%) of the 64 patients and in 16 (13%) of the 128 controls. It was present in all 10 patients with the classic triad of symptoms of Reiter's disease and in 13 (87%) of the 15 patients with less complete forms of Reiter's disease (table). Information about sexual exposure before arthritis was not readily obtained. *Shigella flexneri* serotype I had been isolated from one patient during an earlier admission for dysentery. Keratoderma blennorrhagicum and other mucocutaneous lesions (except balanitis) were not seen. HLA-B27 was noted in 22 (56%) of the 39 patients with symptoms confined to joints.

Comment

HLA-B27 has been reported as rare or absent among several peoples in the south west Pacific. The incidence of HLA-B27 (13%) in our controls was close to that in Europeans. The strong association of HLA-B27 with arthritis in our patients vindicates Maddocks's view that Reiter's disease or something closely akin to it is the predominant form of arthritis in Papua New Guinea.¹ The failure of Jeremy *et al* to recognise Reiter's disease in their study² might indicate a recent spread of Reiter's disease into the highlands or might reflect difficulties in obtaining accurate clinical details.

Our series lends further support to the hypothesis that HLA-B27 is linked

to a range of rheumatic disorders that includes Reiter's disease, reactive arthritis, and other forms of arthritis.⁵ Arthritis associated with HLA-B27 is unusually common in Papua New Guinea, but, interestingly, ankylosing spondylitis is remarkably rare. We have little idea which of the infections linked to Reiter's disease and reactive arthritis will prove to be important locally. Sexually transmitted disease and shigellosis are both widespread; no data are available on chlamydial infections.

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- 1 Maddocks I. Reiter's disease in Port Moresby, Papua. *Br J Vener Dis* 1967;43:280-3.
- 2 Jeremy R, Rhodes FA, Sharp JT, Rawls WE. Clinical and laboratory studies of a distinctive type of arthritis observed in New Guinea. *Med J Aust* 1969;i:1273-9.
- 3 Brewerton DA, Caffrey M, Nicholls A, Walters D, Oates JK, James DCO. Reiter's disease and HL-A 27. *Lancet* 1973;ii:996-8.
- 4 Bhatia K, Gorogo M, Koki G. HLA-A, B, C and DR antigens in Asaro speakers of Papua New Guinea. *Hum Immunol* 1984;9:189-200.
- 5 Arnett FC, McCluskey OE, Schacter BZ, Lordon RE. Incomplete Reiter's syndrome: discriminating features and HL-A W27 in diagnosis. *Ann Intern Med* 1976;84:8-12.

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Acquired cystic disease of the kidney: an indication for renal transplantation?

Acquired cystic disease of the kidney is common in patients receiving dialysis and may be associated with important clinical complications.^{1,2} There is little information on the disease in recipients of renal transplants. We compared the prevalence of cystic disease in patients with a functioning renal transplant and in patients with end stage renal disease treated by haemodialysis and chronic ambulatory peritoneal dialysis.

Clinical features of 64 patients with arthritis

	Patients with Reiter's disease		Patients with arthritis alone	
	With complete triad* (n=10)	With genital lesion† or conjunctivitis (n=15)	HLA-B27 positive (n=22)	HLA-B27 negative (n=17)
M:F	9:1	14:1	18:4	9:8
Mean age (years) (range)	21.8 (12-29)	21.4 (12-32)	25.9 (11-50)	24.9 (7-50)
Mean duration of disease at presentation (days) (range)	21.3 (2-60)	120.3 (5-1095)	120.3 (3-730)	436 (2-1825)
Mean duration of hospital stay (days) (range)	21.5 (8-42)	16.8 (2-43)	14.9 (3-38)	14.8 (1-51)
Mean No of joints affected (range)	6.5 (1-21)	4.3 (2-7)	3.8 (1-8)	7.2 (1-30)
No (%) of patients with:				
Legs affected	10 (100)	15 (100)	22 (100)	17 (100)
Arms affected	5 (50)	7 (47)	7 (32)	8 (47)
Sacroiliac disease	3 (30)	2 (13)	4 (18)	1 (6)
Small joints affected‡:	3 (30)	7 (47)	7 (32)	6 (35)
Hands and feet	1	1	1	3
Feet alone	2	4	5	1
Hands alone		2	1	2
Enthesopathy§	7 (70)	9 (60)	10 (46)	6 (35)
Conjunctivitis	10 (100)	7 (47)		
Urethritis	8 (80)	7 (47)		
Balanitis	4 (40)	2 (13)		
Antecedent diarrhoea or dysentery	2 (20)	3 (20)	4 (18)	Nil
History of relapse	1 (10)	4 (27)	2 (9)	3 (18)
Family history of arthritis	1 (10)	3 (20)	1 (5)	2 (12)
HLA-B27	10 (100)	13 (87)		

*Complete triad=arthritis, conjunctivitis, and genital lesion.†

‡Genital lesion=urethritis or balanitis, or both.

§Tender metacarpophalangeal, metatarsophalangeal, and interphalangeal joints, or "sausage digits."

¶Tenderness over tibial tuberosity, tendo Achillis, os calcis, or deltoid ligament.