HL-A antigens and the sicca syndrome

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The recent interest in the HL-A typing as applied to the rheumatic diseases (Brewerton, Caffrey, Hart, James, Nicholls, and Sturrock, 1973; Schlosstein, Terasaki, Bluestone, and Pearson, 1973) has prompted us to investigate the possible association of an HL-A antigen in patients with the 'sicca syndrome', viz. keratoconjunctivitis sicca and xerostomia. Birch, Bunim, and Bloch (1963) in a clinical and serological study of fourteen patients with Sjögren's syndrome and 121 blood relatives have demonstrated familial aggregation of possible or probable rheumatoid arthritis, decreased lacrimal secretion, and abnormal circulating antibodies. They presented evidence to suggest that this may be due to heredity rather than environmental factors. The peculiar association of the 'sicca syndrome' with malignant lymphoreticular neoplasms (Talal, Sokoloff, and Barth, 1967; Azzopardi and Evans, 1971) is also interesting in view of the association between lymphoma and HL-A5 and W18 (Zervas, Delamore, Israëls, 1970).

Material and methods

To assess whether these observations could be explained by a particular HL-A antigen, we have studied 21 patients

(age range 24 to 86 years; mean 61) with the sicca syndrome of whom nineteen had a depressed salivary flow rate and sixteen a positive labial gland biopsy (Whaley, Chisholm, Downie, Dick, and Williamson, 1968). Rheumatoid factor was present in the serum of sixteen patients) ten had a positive antinuclear factor (titre 1:1-61:256), and six complained of joint pains. HL-A typing was performed using a modification of the technique of Kissmeyer-Nielsen and Kyerbye (1967).

Results

The results are shown in Tables I and II. The frequencies of the antigens occurring in the patient groups do not markedly differ from the frequencies observed in the general population of the West of Scotland tested since 1969. Statistical evaluation using the χ^2 test did not show any significant differences between the two groups. Although the patient sample size is small, it is clear that there is no HL-A antigen showing a striking association with the sicca syndrome.

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Table I HL-A antigen frequencies. First locus antigens

Antigens	Random			Sicca syndrome		
	No. tested	No. positive	Percentage frequency	No. tested	No. positive	Percentage frequency
HL-A1	597	184	30.8	21	11	52.38
HL-A2	597	285	47.73	21	13	61.90
HL-A3	597	135	22.61	21	3	14.28
HL-A9	597	107	17.92	21	7	33.3
HL-A10	597	41	6.86	21	2	9.52
HL-A11	597	51	8.54	21	2	9.52
W28	597	42	7.03	21	1	4.76
'W19'	487	68	13.96	21	1	4.76

Table II *HL-A antigen frequencies. Second locus antigens*

<i>Antigens</i>	<i>Random</i>			<i>Sicca syndrome</i>		
	<i>No. tested</i>	<i>No. positive</i>	<i>Percentage frequency</i>	<i>No. tested</i>	<i>No. positive</i>	<i>Percentage frequency</i>
HL-A5	597	31	5.19	21	0	0.00
HL-A7	597	177	29.64	21	5	23.8
HL-A8	597	186	31.15	21	8	38.09
HL-A12	597	199	33.33	21	8	38.09
HL-A13	597	24	4.02	21	0	0.00
W5	494	40	8.09	21	3	14.28
W10	516	49	9.49	21	4	19.04
W14	502	40	7.96	21	1	4.76
W15	610	48	7.86	21	0	0.00
W16	422	15	3.55	21	3	14.28
W17	491	33	6.72	21	3	14.28
W18	399	21	5.26	21	2	9.52
W21	477	12	2.51	21	0	0.00
W22	495	17	3.43	21	0	0.00
W27	509	45	8.84	21	2	9.52

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