

CIRCINATE EROSIVE BALANITIS AND HL-A 27

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Abstract. The HL-A phenotype of 17 patients with a typical clinical picture of circinate erosive balanitis was determined. Eight of the patients had other signs of Reiter's disease and 9 had balanitis alone. HL-A 27 was found to be present in 15 of the 17 cases. One patient of each group lacked this antigen. The frequency of the other histocompatibility antigens did not significantly differ from that of a Finnish control population.

Key words: HL-A 27; Circinate balanitis; Reiter

Reiter's disease is classically characterized by urethritis, arthritis, and conjunctivitis or uveitis. Additional signs of the disease, although less frequent, are balanitis, lesions of the buccal mucous membrane, and keratoderma blenorrhagica. Penile lesions associated with Reiter's disease have been reported to occur in approximately one out of four patients (5). The typical penile lesion found in patients with Reiter's disease is a circinate erosive balanitis. However, in a dermatovenerological practice the same type of balanitis is often seen alone without other signs of Reiter's disease.

Recently a strong association between Reiter's disease and the histocompatibility antigen HL-A 27 has been reported (1, 2, 3, 4, 6, 8, 9). The purpose of this paper is to present the incidence of HL-A 27 in a series of patients with circinate erosive balanitis with and without other signs of Reiter's disease.

MATERIAL AND METHODS

During the period December 1973 to July 1974 17 patients with circinate balanitis (Fig. 1) were seen at the Out-Patient Department of Dermatology, University Central Hospital, Helsinki. Nine of the patients had never had urethritis, arthritis, conjunctivitis or any other sign of Reiter's disease; three represented classical Reiter's disease (urethritis, arthritis and conjunctivitis, while five had some sign of Reiter's disease (Table I)). The duration of balanitis varied from 1

week to 7 years. In the long-standing cases the balanitis was recurrent and the duration of each episode had varied from a few weeks to a few months. In 4 of the 8 cases with signs other than balanitis, the latter had been the initial sign of the disease.

X-ray examination of the sacro-iliac joints was performed in all cases and roentgenological signs of sacro-iliitis were detected in 2 cases (nos. 3 and 8, Table I). The duration of the balanitis was 2 and 3 years respectively in these cases and both had additional signs of Reiter's disease. In case no. 8 balanitis was the initial sign of the disease. All patients were examined for yersinia-infection serologically and by cultivation of faeces. There was no sign of infection in any case. All 17 patients had negative Waaler-Rose and latex tests for rheumatoid factor.

HL-A histocompatibility antigens were determined by the microlymphocytotoxicity test (7). For each specificity at



Fig. 1. Circinate erosive balanitis (case no. 14).

Table I. Clinical data and HL-A phenotype of 17 patients with circinate erosive balanitis

Case no.	Age (years)	Duration of balanitis	Urethritis	Arthritis	Conjunctivitis	Keratoderma blenorrhagica	Sacroiliitis	HL-A phenotype
1	17	1 week	+	+	+	-	-	2, W19, 5, 27
2	25	1 month ^a	+	+	+	-	-	9, 11, 27, W10
3	34	2 years	+	+	+	-	+	2, 3, 7, 27
4	30	3 months	+	+	-	-	-	2, 9, 5
5	27	3 months ^a	+	-	-	-	-	2, 27
6	30	1 month ^a	+	+	-	+	-	2, 3, 27, W10
7	22	9 months	-	+	-	-	-	3, W19, 27, W16
8	29	3 years ^a	-	-	+	-	+	2, 28, 27, W15
9	42	1 year	-	-	-	-	-	2, 28, 27
10	25	6 months	-	-	-	-	-	2, 3, 27, W5
11	43	3 months	-	-	-	-	-	2, 3, 27, W5
12	35	4 months	-	-	-	-	-	1, 2, 8, 27
13	30	3 months	-	-	-	-	-	1, 2, 8, 27
14	24	1 year	-	-	-	-	-	3, 9, 27, W5
15	34	4 years	-	-	-	-	-	2, W19, W5, W22
16	32	7 years	-	-	-	-	-	2, 27, W5
17	34	2 years	-	-	-	-	-	9, W19, 27, W18

^a Balanitis was the first sign.

least two reagent sera were employed. In each case they included sera of both foreign and local origin, and were either international "standard reagents" or their equivalents, as observed in wide series of parallel tests in our laboratory.

RESULTS

The HL-A phenotype of the 17 patients is presented in the Table. HL-A 27 was present in 7 of the 8 patients with circinate balanitis associated with some sign(s) of Reiter's disease, including the 3 patients with the classical triad (cases 1, 2, 3). The only patient without HL-A 27 (case no. 4) suffered from nonspecific urethritis and peripheral polyarthritis in addition to a typical circinate balanitis. Among the 8 patients there was only one definite homozygote (case no. 5) with HL-A antigens 2 and 27.

Eight of the 9 patients with circinate balanitis not associated with other signs of Reiter's disease had HL-A 27. The patient lacking HL-A 27 (case no. 15) had had a typical recurrent circinate balanitis for 7 years. There was no definite homozygote among the 9 patients.

The frequency of the other histocompatibility antigens detected in the present series did not significantly differ from that of a Finnish control population. None of the 17 patients in the present series had HL-A antigens 17 and 13, which are frequently present in patients with psoriasis.

DISCUSSION

The diagnosis of classical Reiter's disease is based on the association of nonspecific urethritis, arthritis and conjunctivitis in a single episode of the illness. The manifestations are, however, not always simultaneously present and other signs, such as skin and mucous membrane lesions or diarrhea, may occur during the course of the disease. Therefore, the clinical picture of Reiter's disease is often incomplete and variable.

Circinate balanitis, when once seen, is an easily recognizable clinical entity occurring both together with signs of Reiter's disease and alone. As is evident from the present series, this type of balanitis may precede the manifestation of other clinical signs of Reiter's disease since in half of the patients with balanitis associated with other signs of the disease, balanitis was the first sign.

The HL-A antigen 27 is present in about 90% of patients with Reiter's disease (1, 2, 3) but only in 14% of a Finnish control population (7). The incidence of HL-A 27 in the present series, both in the cases with circinate balanitis alone and in those with circinate balanitis associated with other signs of Reiter's disease, compared well with that of Reiter's disease, since only one patient in each group lacked this antigen. This suggests that circinate balanitis, even when present alone, may be interpreted as an early sign of Reiter's disease, and such

patients should be observed for the potential development of further signs of the disease.

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