

Herpes Simplex as a Possibly Occupational Disease in Dentists of the County of Aarhus, Denmark

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Among the 765 dentists of the County of Aarhus, Denmark, a total of 65% answered a questionnaire on possible herpes panaritium experience. Among the answers 3.8% were positive. Among these, 10 had circulating antibodies against herpes simplex virus. During the study a case of recurrence of a panaritium, which appeared to be a herpes simplex infection, occurred. *Key words: Herpetic whitlow.* (Received July 21, 1983.)

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Occasional reports on cases of herpetic infections of one or more fingers among nurses working in intensive care units, and some cases among dentists have previously been reported (1, 2, 3).

The purpose of this investigation has been, by use of a mailed questionnaire, to investigate the life experience of herpes panaritium (HP) among the dentists of the County of Aarhus, Denmark.

MATERIAL AND METHODS

Questionnaires were sent to all dentists in the County of Aarhus, totalling 765 (355 females and 410 males).

The questionnaire was formed as a short introduction with photo from a former verified HP followed by 4 questions, here briefly quoted:

1. Have you ever had one or more periods with vesicles or sores on the terminal segment of a digit or digits, and if "yes", how many times?
2. Have you ever had a nail removed as a treatment?
3. Has any other treatment been tried?
4. Indicate finger or fingers that have been affected.

To ensure anonymity we had renounced upon coding of the answers. Therefore, a follow-up on non-responders was not possible.

Among 19 who answered positively, 16 had given their names with the purpose to be contacted for further examination, i.e. complement fixation (CF) and neutralizing antibody test (NT) (4). In the case which recurred, culture and typing were carried out according to the methods described elsewhere (4, 5).

RESULTS

Out of 765 dentists 498 (65.0%) answered the questionnaire and among these 19 (3.8%) reported to have had one or more lesions similar to the photograph. We were able to contact 16, among whom 10 were females and 6 were males (Table I).

It appeared (Table I) that 10 had positive CF and/or positive NT tests. Out of these both labial and digital herpes had been experienced by 3, while 7 had experienced lesions on the fingers only. Six were negative to both CF and NT tests, and out of these one had *Candida albicans* isolated from an actual lesion. One of the dentists (Table I, no. 10) acquired her primary finger lesion as a dental student.

Two patients (Table I, no. 5 and no. 13) had had a nail removed as treatment of their paronychia, neither of them had experienced herpetic lesions in other regions. Both of them showed positive NT and CF tests.

During the investigation period one dentist (Table I, no. 1) had her first recurrence of a paronychia, which could be demonstrated to be a herpes simplex lesion. It originally occurred after an accidental stab in the finger with an infected dental probe and was therefore reported to the relevant health authorities as a case of occupational disease.

DISCUSSION

The present investigation indicates an occupational risk among dentists to become infected with HSV on the fingers.

The study was designed to give highest priority to the anonymity of the responders. Thus a follow-up on non-responders was not possible. Evidently a response rate of 65%

Table I. Anamnestic and clinical data for 16 dentists with a possible history of herpes paronychia

CF = complement fixation test, NT = neutralizing antibody test

Dentist no.	Sex	Age	Years as dentist	Years since first attack	No. of attacks	Location of lesions (d=right, s=left)	Herpes in other locations	CF (neg. <4)	NT (neg. <10)
1	F	41	16	1 1/2	2	Dig. I s.	-	<4 (day 2) 16 (day 23)	<10 (day 2) 40 (day 23)
2	F	30	6	1	4-5	Dig. II s.	-	<4	<10
3	M	40	16	4-5	5	Dig. II s.	-	<4	<10
4	F	41	16	3	3-4	Dig. III s.	-	16	10
5	F	43	17	9	3	Dig. I d.	-	16	10
6	M	45	20	4	7	Dig. IV d. & s.	-	<4	10
7	M	48	24	4	1	Dig. II s.	-	8	10
8	F	33	9	6	6	Dig. I, II, III d. & s.	-	<4	<10
9	F	34	9	5	5	Dig. I, II s.	-	<4	<10
10	F	27	3	8	10-15	Dig. II, III d.	-	16	160
11	F	34	11	6	10-12	Dig. I, II, III d. & s.	+	32	160
12	F	54	32	1/2	3-4	Dig. III d.	-	<4	Not tested
13	F	36	10	2	2	Dig. III s.	-	8	40
14	M	35	10	8	5-6	Both hands	-	<4	<10
15	M	41	16	Some years	Regularly	Dig. I, III, IV d.	+	64	≥160
16	M	33	9	2	2-3	Dig. IV d.	+	<4	160

could give no prevalence of HP among dentists in the epidemiological sense of the word, but still the survey indicates the existence of an occupational disease of an order of magnitude, which makes further study relevant.

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