

Industrial nasal problems

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There are two problems in the interpretation of occupational damages in the upper respiratory tract: first the difficulty to distinguish the influence of air pollution in the working place and the general air pollution in the geographical region, and secondly the monotonous response of the nasal mucous membrane to different affecting substances. Only in a few special cases it is possible to identify the causing noxa from the nasal finding (galvanisation). We have the impression that hyperplastic and atrophic rhinitis are not different disorders depending on special chemical substances, but different stages in one and the same pathological course. It is only a question of time that the hyperplastic mucosa changes to a atrophic one. For this reason the only possibility to test the influence of working places is by comparison between the morbidity rate in a special group of workers and that in the general population.

Table 1 shows various irritative substances reported in 123 men, referred to our department with the tentative diagnosis of changes in nose and larynx caused by occupational influences.

Table 1. Frequency of noxas in 123 adults exposed to occupational air pollution.

	cases	%
acids/anhydrites	30	24.4
solvents/lacquer	15	12.2
dust	22	17.8
welding fume	15	12.2
galvanic fume	12	9.7
several chemical substances	10	8.1
formaldehyde	6	4.9
ammonia	6	4.9
plastic and rubber	5	4.1

The results of our series of examinations in four groups of workers exposed to coal dust, welding fume, isocyanates and spraypainting smog are shown in Table 2. The frequency of pathological findings (clinical and cytological) surmounts the

Table 2. Results in series of examination.

exposition	cases	rhinitis hyperpl.	rhinitis atroph.	laryngitis	nasal obstr.
isocyanid	82	74.4	15.8	40.2	20.7
vanadium	46	58.7	15.2	50.0	19.6
welding fume	61	4.9	49.1		40.9
spraypainting	39	83.3		75.0	
coal dust	109	21.0		17.0	

percentage of chronic rhinitis in the general population (1.3–2.8%) calculated on 20 000 outpatients in different places of our country.

An interesting observation is the frequent presence of eosinophils in the nasal smear of welders.

Altogether it seems to be useful to have a regular control of all people exposed to known irritative substances for protection the upper and lower respiratory tract.

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