

Respiratory Tract.—With regard to the upper respiratory tract, the workers were kept under close supervision and were examined by the same specialist at an initial examination and periodically after that, or when necessary, and finally were given an unbiased examination in October 1948, when the greatest possible objectivity was aimed at. Unfortunately, I had not at my disposal a sufficiently large control material and was obliged, therefore, to compare my series with another investigator's control material (Richtnér⁹), which includes 703 workers from mines and sawmills in the north of Sweden, who were examined according to the same method and who presumably had been exposed only to inert dust. Although the results of this comparison should be assessed with caution, it seems justifiable to draw the following conclusions:

At the time of the first examinations the incidence of nasal catarrh (slight or copious) was abnormally high (42 per cent, against 20 per cent in the controls) but this was by no means an essential symptom. There were also cases in which symptoms were absent despite objective changes. Other types of nasal involvement were sores in the nares, dryness or smarting of the nose and nasal obstruction in the absence of nasal catarrh. The observed changes were generally moderate, in some cases marked, but never severe with, for example, perforation. The number of workers with normal nasal conditions was probably lower than in the control series (40 per cent against 80).

The incidence of complaints of throat dryness, irritation or pains was also abnormally high (approximately 86 per cent against 8) and that of a normal condition of the throat abnormally low (42 per cent against 64). Only moderate or marked changes were observed.

The incidence of laryngeal involvement in the form of hoarseness was not abnormally high, even though the percentage of normal throats was much lower than among the controls (42 per cent against 88). As before, no severe changes were observed.

Laryngoscopic examination of the trachea showed that the percentage of normal tracheas was approximately equal to that for the control series.

At the final examination of the upper respiratory tract (in October 1948) the incidence of the normal condition was lower than at the first examination with regard to the nose (50 per cent against 61), the pharynx (10 per cent against 42) and the larynx (27 per cent against 42). With regard to the nose, the majority of those examined showed acute and chronic-hyperlastic changes, several of which were "allergic in type." In the pharynx acute and chronic-atrophic changes predominated. The larynx and the trachea presented only acute conditions. No severe changes were observed.

A comparison has been made between the results of the first examination of the upper respiratory tract and those of the final examination for two groups of the workers who attended both examinations, that is, those who had worked permanently or frequently at the factory and those who had had other employment for the larger part of the observation period. No significant increase of the pathologic changes was demonstrated in either group. The number of workers with changes in the pharynx was greater at the final examination in the first-mentioned group,

9. Richtnér: Rönnskärsutredningen, stenciled in the archives of the State Institute for Public Health, Tomtebodå, Sweden, 1949.