

Opinion is divided as to the occurrence of so-called chronic poisonings. This term should refer to a prolonged state of disease which etiologically can be listed as the result of having been exposed for a long term to concentrations of hydrogen sulfide which per se do not produce acute or subacute poisoning, or of having been repeatedly exposed to such concentrations. It has not been possible experimentally to obtain objective symptoms with dogs exposed seven hours daily for two months to air with 0.01 per cent of hydrogen sulfide (Moser,¹³ 1940). Men exposed to the gas in question in their work sometimes show neurasthenic symptoms, such as fatigue, headache, dizziness and irritability, which have been explained as signs of encephalopathy caused by the gas (Noro,¹⁴ 1944), but it is no doubt difficult to fix the degree of exposure in these cases. Probably most of the patients have had slight acute poisonings, and the troubles may rather be explained as sequelae of such poisonings. Davenport¹⁵ (1945) said that chronic hydrogen sulfide poisoning from constant exposure may result in mental depression, weakness, sweats and frequent chills but that disability is unlikely.

Sequelae of acute poisonings have been described by some investigators, but in most cases the connection between a possible exposure and the symptoms seems doubtful. Von Rad and Scheidemantel¹⁶ (1933), however, describe a case about which there can be no hesitation concerning the connection: A man exposed to a hydrogen sulfide concentration of approximately 0.6 per cent collapsed but revived after having been taken out of the gas. Afterward he had strong air hunger and tonic cramps of the extremities. After a week neurasthenic symptoms developed with severe insomnia and signs of extrapyramidal damage. His facial movements disappeared and also the associated movements in his arms; he had weak convergence and lacked the right abdominal reflex. An examination half a year later showed practically the same conditions.

Chronic hydrogen sulfide poisoning is listed in the Swedish Workmen's Compensation Act. Thus the differential diagnosis entails economic consequences. In general, the lack of clinical tests for proving exposure and the absence of typical symptoms have made the diagnosis difficult. The possibility of exposure, the occurrence of mucous membrane irritation and neurasthenic symptoms which cannot be explained otherwise have constituted the meager basis of the diagnosis chronic hydrogen sulfide poisoning.

CLINICAL INVESTIGATION

The clinical investigation comprises (a) acute poisonings with symptoms that indicated involvement of the central nervous system and (b) subacute poisonings with, in the main, conjunctivitis. In order to get an idea of a possible occurrence of so-called chronic poisoning, a comprehensive investigation has been made among the entire working staff, with comparisons being made between more exposed and less exposed groups.

13. Moser, P.: Arch. f. exper. Path. u. Pharmacol. **196**:446, 1940.

14. Noro, L.: Duodecim **34**:23, 1944.

15. Davenport, S. J.: Information Circular 7329, United States Department of the Interior, Bureau of Mines, 1945.

16. von Rad and Scheidemantel: München. med. Wchnschr. **80**:1494, 1933.