

after breathing has stopped. Oxygen with about 5 per cent of carbon dioxide inhaled during a period of 15 to 20 minutes has been valuable in all cases of hydrogen sulfide poisoning and has also given rapid subjective relief. Owing to the risk of complications on acute poisoning with unconsciousness, such as pulmonary edema and circulatory disturbances, hospital treatment is indicated. Hospital equipment is also necessary for studying sequelae.

In cases in which there are sequelae, the patients should be sent to convalescent homes, or at least kept away from their families, and must avoid all work that can cause optokinetic nystagmus during the time they show otoneurological symptoms. Sedatives are to be given to anxious patients; caffeine, to patients with headache, fatigue, etc., even during the first days of work. Prolonged sick leave should of course be avoided in cases of neurasthenic troubles, and the patients should generally be given easy work as soon as the otoneurological symptoms have disappeared, the work being gradually increased. Attention must be paid to their increased susceptibility to gases of all kinds.

Aspects Related to Insurance.—In order to facilitate subsequent diagnosis, and for a possible later report to an insurance institution, workers who have incurred a mild form of intoxication should report the fact to the safety engineer. The diagnosis *sequelae post intoxicationem acutam e H₂S* should be based on proved exposure and a history of acute intoxication followed by neurasthenic and otoneurological symptoms. Other diseases (syphilis, encephalitis, hypertonia, etc.) should be excluded, as well as carbon monoxide poisoning. If otoneurological symptoms are lacking and if the occurrence of the acute poisoning depicted in the anamnesis is doubtful, a psychiatric examination should also be made.

It is important that workers with a previous history of nerve or psychic diseases be prevented, by preemployment examination, from doing work involving risk of hydrogen sulfide exposure.

SUBACUTE INTOXICATION

Subacute intoxications are due to hydrogen sulfide irritation of the mucous membrane, and they have been fairly common among the workers at the sulfur and the Ljungström plant. Most of them have occurred in the following manner: A thin jet of gas has suddenly shot out against the face of the man working with pipes or pumps. Automatically he has held his breath and gone to get his gas mask. The exposure, therefore, has been extremely intense but brief. Within 12 to 24 hours keratoconjunctivitis has developed, with pain, itching, photophobia and other eye disturbances. The symptoms of pharyngitis and bronchitis, however, have been slight.

The most important cause of this keratoconjunctivitis, which sometimes is violent, is, no doubt, secondary infection. By just pointing out to the workers the importance of not rubbing the eyes after exposure but only rinsing them with boric acid solution, the number of sick leaves at the shale oil plant due to subacute poisonings was reduced from 243 in 1945 to 73 in 1946 and 75 in 1947.

It is possible that the low frequency of eye injuries in acute intoxications is due to the fact that the patients, because of unconsciousness or reduced general reaction, do not infect the conjunctivas secondarily with their hands.