

viable amount. Then such a gas as carbon monoxide combines with the hæmoglobin and prevents the corpuscles carrying oxygen to the tissues. Some gases, such as cyanogen, hydrogen sulphide, and hydrocyanic acid caused the paralyzing of the respiratory centre. The gases employed by the Germans, namely, chlorine and bromine, act as irritants on the mucous membranes of the eyes and of the respiratory passages.

The use of such gases is illegal according to the rules of warfare to which Germany had set her hand. Professor Hill, however, points out that Germany had secretly prepared this method of offence before the war began. There are records of German experiments that bromine and chlorine gas in the strength of 1 in 10,000 would put a man out of business. Sulphur dioxide, nitrogen peroxide, chlorine, phosgene, and bromine are all heavier than air and hover over the ground, and dilute slowly. Bromine and chlorine are capable of being greatly condensed into receptacles. The chlorine gas is condensed under 90 lbs. pressure to the square inch, and is delivered in front of the trench through a pipe. The liquid spray assumes the form of a gas of a wellowy-greenish color.

Chlorine gas in the proportion of 1 in 10,000 is fatal, as no one could stand the intense irritation caused by it. There is a rapid exudate of a watery secretion, which is nature's effort to dilute the gas. Doses of 1 in 100,000 are distinctly irritating. Chlorine gas spends its energy on the lungs, and the albuminuria found in these cases is the effect of the intense and prolonged dyspnœa.

The victim of gas poisoning is often deeply cyanosed, the temperature is usually subnormal, and he is conscious but restless. The effort of respiration is at times very desperate, and there may be a copious flow of frothy expectoration. This is usually followed by a severe bronchitis. The prolonged dyspnœa frequently gives rise to nephritis, with convulsions.

The bronchial mucosa is intensely congested. There is also an intense congestion and œdema of the pulmonary tissues. The lungs do not collapse on being cut, and are of a deep maroon red color, and an exude flows from the cut surface in abundance. Parts of the lungs become emphysematous.

In severe cases artificial respiration may be required from time to time to relieve the dyspnœa, which it does by forcing the mucus from the bronchial tubes. Emetics have also proven very useful. The inhalation of oxygen gas for the cyanosis is valuable. Atropine, with the view of lessening the flow of mucus, has been extolled, but experience does not bear out the claims made for it at first.

---