may be taken that the person has been exposed to a significant dose of the gas.

The early symptoms mentioned later should be looked for and, where there is doubt, precautions should be taken on the assumption that gassing has occurred. The most important treatment is warmth, rest and quiet. Only the cases in which there are definite reasons for assuming exposure to the gas should be removed to the first aid centres. The other people should be advised to return quietly home and lie down, and to obtain medical advice if they have not recovered by the next day.

The cases of phosgene poisoning taken to the first aid centres must invariably be protected from cold, and carried, as any exertion is highly dangerous and may have fatal results.

The employment of arsenical smokes might cause widespread alarm unless care is taken to allay the fears produced by the symptoms. The effects are painful and unpleasant rather than injurious. A person who has been exposed to these gases will feel ill and may imagine himself a serious casualty. But in most cases, if he can be persuaded to rest quietly the effects will rapidly subside. The general public must be made to understand that they can be given no appreciable relief from this type of gas if removed to a first aid centre. Notwithstanding this advice a number of cases suffering from the effects of arsenical smokes must be expected to come to the first aid centres, and suitable accommodation must be provided to deal with them.

Tear gases would cause a good deal of inconvenience, but no treatment should be necessary. Persons who have been exposed to these gases should be advised that no ill effects will remain after the initial discomfort has passed.

The personnel of the first aid parties must take care to avoid becoming casualties themselves, either by inhalation of poisonous vapour from the clothing of their patients, or by actual contact of themselves or their clothing with such substances as liquid mustard gas. They must use their own judgment with regard to the wearing of respirators and protective clothing, but when it is definitely known that persistent gas has been used in an area, it is essential that the protective clothing should be worn.

If only non-persistent gas has been used or is suspected, the carriage of the respirator in an "Alert" position may be a sufficient precaution.

In the following section a brief description is given of the symptoms resulting from exposure to the various war gases and the primary measures which should be adopted to relieve and mitigate the injuries resulting therefrom.

If a more complete description of the injuries and their treatment is required, the reader is referred to the separate handbook on the Treatment of Gas Casualties (Air Raid Precautions Handbook No. 3).

The Treatment of Casualties due to Choking Gas.

The most important examples of this class of gas are phosgene and chlorine. They both give rise to irritation of the air passages, but their chief effect on the lungs is damage to the blood vessels and air cells. This results in a pouring out of fluid from the blood vessels of the lungs into the air spaces, and consequent interference with the intake of oxygen.

A much stronger concentration of chlorine is required to produce this flooding of the lungs than in the case of phosgene, but the former gas is far the more irritant to the respiratory passages.

A most important feature, which is peculiar to phosgene poisoning, is the delay in the onset of serious symptoms. Many cases have ended fatally owing to the seriousness of the injury not having been appreciated by the patient. After recovering from the first effects of the gassing, a person may feel capable of walking or continuing his duties. Subsequently, as a result of the exertion, he may collapse.

Casualties from these lung irritants are the most likely to prove fatal of all those arising from chemical agents, and they must therefore be treated with extreme caution.

After exposure to a poisonous concentration of one of these gases the development of symptoms is as follows:—

The patient experiences a feeling of suffocation with violent coughing and sometimes retching and vomiting. In many cases there is also irritation of the eyes. On removal from the poisonous atmosphere these symptoms may lessen or disappear, and the patient appear normal for some hours. If, however, the amount of gas inhaled has been sufficient to cause injury to the lungs, the symptoms will return and gradually become worse.

Breathing becomes difficult, and may be interrupted by coughing, which is sometimes accompanied by copious watery expectoration. The patient's colour changes, and he becomes either flushed and purple in the face, with distended blood vessels, or pallid with the lips and tips of the ears of a lilac colour. The latter condition is much the more serious and indicates that he is not getting sufficient oxygen for his bodily needs. The pulse becomes full and bounding in the flushed cases, and rapid and thready in the pallid cases.

If the injury is grave, the symptoms described above nearly always appear within about 12 hours of the exposure, and if such are not apparent within 24 hours the patient may be regarded as out of danger.

In all cases of injury from lung irritants the essentials of first aid treatment are rest and warmth. Tight clothing should be removed or loosened and the patient made to rest quietly in warm blankets. Hot water bottles should be applied if the patient appears cold. In severe cases the especial danger is due to lack of oxygen, and to combat this deficiency, oxygen should be administered continuously and over a long period. Oxygen should, of course, only be given under medical supervision and by trained personnel using one of the special types of apparatus available for the purpose. The aim should be to tide the case over the critical period of the first two days.

The Treatment of Casualties due to Nose Irritants.

The gases comprising this group are principally arsenical compounds, and are sometimes termed sensory irritants. They give rise to intense irritation and pain in the air passages, but in the concentration which can be obtained by war methods they do not cause serious damage to the lungs. Exposure to these substances produces symptoms which usually develop in the following order:—

At first, irritation is felt at the back of the nose and throat, which in some cases is accompanied by sneezing and pain in the gums. The irritation rapidly increases and extends throughout the breathing passages, giving rise to intense pain in the nose and throat, and to burning pain and a sense of oppression in the chest, coughing which may lead to vomiting, and severe headache. The gnawing pain and discomfort make the sufferer feel utterly miserable.

On removal from the poisonous atmosphere the severity of the symptoms may tend to increase for a short time. Improvement then occurs and the pain rapidly disappears leaving no after-effects.

No first aid treatment is necessary in these cases, as they will completely recover after a short period of rest.

(To be concluded.)

All horses in Austria who survived service during the Great War are to be decorated with a medallion which has been specially designed. In addition, each is to be the recipient of 100 lb. of oats.

previous page next page