

kept up by pulling on the ends of the bandage from behind. The fluid is measured and charted.

Use of Digitalis.—Digitalis is a valuable drug in cases of heart failure, though it does not usually have the same dramatic effect as in some cases of heart disease—for example, in auricular fibrillation. It is given in the form of tincture, the dose, from five to 15 minims, varying with the weight of the patient; or an initial dose of as much as two drachms may be given. It is also administered in the form of digitalin—tab. digitalis folia. The action of the drug strengthens the heart muscle and the heart's action is slowed. It also acts as a tonic to the arteries and increases the flow of urine, both of which are of great value in heart failure. While treatment by digitalis is in progress, the condition of the patient must be carefully watched. As soon as any signs of poisoning occurs, such as a slow pulse (below 60), nausea and vomiting, the drug should be stopped and the doctor informed. He will decide if the vomiting is due to congestion or to the drug. If the vomiting is accompanied by a slow pulse rate it is generally safe to say it is due to the drug. If the pulse rate is not too slow the drug is continued for a day or two, in spite of the nausea and vomiting. The congestion of the stomach may disappear under the treatment. The patient will need encouragement in taking his medicine, but we can assure him the unpleasant symptoms will soon pass and that it is worth trying.

Venesection is a most potent remedy. The beneficial effect is usually only temporary, but, in some cases of heart failure in which the right side of the heart is dilated, the removal of the blood tides the patient over a period of cardiac embarrassment. He will almost always speak of relief both from breathlessness and from the sense of tension in the head. Sleep, too, becomes easier to obtain. In an adult of medium weight about 10 to 20 ounces of blood can be withdrawn, according to the severity of the congestion. For the relief of pain over the liver, or enlarged heart, an ice bag may be applied, suspended from a bed cradle, to avoid the weight of the bag. The application of leeches will sometimes relieve the pain when other remedies have failed. We should not be too despondent about this type of heart failure. Many respond quite well to the treatment which, in cases of a less severe type, will, of course, be less drastic from the beginning. In all cases, however, rest must be continued in order to re-establish the heart's reserve force. Often six to eight weeks in bed is necessary. The patient may do more for himself as he recovers his strength, and during his prolonged rest some mental occupation should be arranged. Gentle massage, especially to the legs, and a return to a fuller dietary give the patient an interest and help his convalescence.

—From the 'Nursing Times'.

'ANTI-GAS DEFENCE'

(Notes from some Lectures by COLONEL HEPPLÉ at Karachi)

MISS TURTEN, Civil Hospital, Karachi

Gas is divided into :

- (1) Choking gases (such as chlorine and phosgene).
- (2) Tear gases.
- (3) Nose gases.
- (4) Blistering gas. (Mustard gas—which is made from sulphur, chlorine and alcohol).

Mustard gas is the only *persistent* gas—as an instance, one can be blistered by earth which has been exposed to mustard gas twelve days previously. Mustard can remain in the soil, wood, bricks etc. (depending on weather conditions) as long as six months. Naturally the greater the heat, the more quickly will it be absorbed; it will penetrate the skin, clothing, leather etc. and any food it has come in contact with must be destroyed.

The Choking Gases are lethal; they effect the respiratory tract. We should be able to recognise chlorine from its smell. They are quickly absorbed into the atmosphere, so one could safely walk into a place that has been attacked with choking gas, ten minutes later.

Treatment: (1) Respirator.
(2) Rest (stretcher case).
(3) Warmth.
(4) Oxygen.

Tear Gases are non-lethal.—They cause lachrymation and paralysis of the eye-lids, which soon passes off.

Treatment: (1) Respirator.
(2) Wash eyes with saline or Boric lotion.

Nose Gases remind one of mouldy hay; they attack the bronchial tubes and so on to the alveoli spaces in the lungs causing a similar condition to that of drowning. There is a tight feeling of suffocation and they have a very depressing effect.

Treatment: (1) Respirator, which will not give immediate relief; on the contrary the feeling of suffocation is worse; but one must continue to use the respirator which will eventually give relief.

(2) Chloroform (just a whiff) Col. Hepple thought they might be able to put up chloroform in tiny capsules, like Amyl nitrite is at present. So that they can be carried in the haversack containing the respirator.

(3) Rest.
(4) Warmth.
(5) Oxygen.

Mustard Gas (which comes under the heading of blistering gases) is dangerous because of its—

- (1) Persistence
- (2) Solubility
- (3) Its insidious action
- (4) Stability
- (5) Penetration
- (6) Delayed appearance of signs
- (7) Delayed healing.

We call it mustard gas, because it reminds some people of mustard, others of garlic. So one should be able to detect the smell as its action is so insidious. It attacks the respiratory tract if inhaled, penetrates through clothing and so blisters the skin and naturally if swallowed in food will cause serious damage to the alimentary tract. It may be used as an oil, or vapour. It is colourless, but can be detected with Detective paint paper, which is yellow, but will turn red if it comes in contact with mustard gas. Bleach ointment is effective if applied within 5 minutes on the skin splashed with mustard gas. The service type of respirator is the best protective measure; other articles of personal protection are protective gloves made of wiggam material, oil skin clothing and gum boots. Gum boots can be boiled to decontaminate them.

Buildings could be made safe against gas by boarding up or pasting over the windows with blankets or celaphane inside, and providing a blanket on

the outside door. Fireplaces closed with pillows or cushions. The room should be off the wind-side and near soft ground if possible. A battery of containers fitted, would provide filtered air which would be sucked in by a small fan. There will have to be provision for an air-lock undressing room; and provision made for disposal of clothing and issue of fresh clothing is also necessary.

For clothing contaminated with mustard vapour, washing with soap and water for 15 minutes is sufficient for light dresses and under clothing. In the case of liquid mustard, woollen clothing would have to be decontaminated by steam, and cotton or other washable clothing boiled for one hour.

The rubber face-piece of the respirator and connecting tube could be boiled—the eye-pieces smeared with bleach ointment. If mustard gas has come in contact with clothing, it penetrates; so the clothing must be removed within 5–20 minutes—one does not feel the immediate effects of the burn, it may take as long as 6 hours for the skin to redden, but it leaves a nasty burn which eats into the tissues and takes a long time to heal.

Bleach ointment is of no use unless applied within 5 minutes; it must be removed after a few minutes (for it also raises a blister), and the part washed with soap and water. The next best thing to bleach ointment is to scrub well with soap, water and a nail brush and remove the cuticle.

The service respirator has a canister at the end which contains specially prepared charcoal and filter material, which will prevent *any form* of gas entering the respirator, but does not prevent the oxygen from filtering through. There is an opening in the face-piece of the respirator for the expired air to escape. One is also able to carry on a conversation through the respirator. Of course one would not require a respirator unless one were working in a highly contaminated area for a prolonged period—they are very expensive and cost about £1.

Ground that has come in contact with mustard gas, should be covered with earth and that part isolated for weathering.

OBLIGATIONS AND IDEALS IN NURSING

Abstract of a lecture given

By B. EDGEELL, M.A., Ph.D., D. Litt.

*Emeritus Professor, University of London, during the Special
Course in General Nursing and Public Health held at the
College of Nursing*

Broadly speaking, we may reflect upon conduct from two points of view. We may think about a man's deeds, his place in society, his duties, what he owes to others—his obligation; or we may think of the inwardness of a man's life, his character, the aims he seeks to realise—his ideals. These two lines of reflection are not opposed to each other, rather they are complementary, each bringing out an aspect of conduct important for ethics.

The 'Law of Benevolence'. When we look for a general principle lying behind moral obligations we find that the 'Law of Benevolence' covers a very wide field. Happiness is regarded as something to which all have a claim, and which it is the duty of all to promote. Justice, truth, honesty are obligatory as forms of conduct necessary to ensure the well-being of members of the community. 'Everyone to count for one and nobody for more than one.'