

slowly, about half to one pint at a time, the funnel never being allowed to get quite empty, otherwise air will be introduced.

When it is necessary to empty the stomach which is usually when about a pint to a pint and a half has been introduced the funnel must be lowered before all the lotion has vanished down the tube and inverted below the level of the patient's stomach to allow a return of the fluid. This lavage is repeated until the fluid returns quite clear.

When the treatment is finished the tube is pinched and quickly withdrawn and placed in a bowl of tepid water. The patient is given a mouth wash and made comfortable.

If necessary the siphoned contents should be saved for the doctor's inspection and measured.

If a child, a large soft rubber catheter or a small cesophageal tube, with a weighted end, and several lateral openings is used, and connected with a tubing and funnel.

The lotion used may be normal saline or sodium bicarbonate, one drachm to a pint, or plain sterile water. The child is wrapped in a blanket and is seated on the nurse's knee looking towards her left side and the head supported by the right arm.

The tube is dipped in butter, glycerine, or warm water and the child's lower jaw held down by the nurse, the tube is passed rapidly over the centre of the tongue into the pharynx and so into the stomach. It may be necessary to depress the tongue, or if the child has teeth, a gag may be necessary to prevent it biting the tube. Any gas present in the stomach is allowed to escape, and the lotion run in, care being taken not to pour in more than the stomach can comfortably hold. This is repeated until the returning fluid is quite clean. The amount given, and returned, should be measured.

The stomach pump consists of a long pipe with a branch at right angles and is so constructed that the fluid can be pumped in and out of the stomach as desired. The syphon tubing is a long piece of rubber tubing with a glass funnel at one end. The tube is lubricated and its end bent to nearly a right angle. The patient's head is held well back and he is asked to open his mouth, or if necessary a gag is inserted. The tube is passed over the tongue, pharynx and on to the cesophagus, when the head is brought forward, and so into the stomach.

Miss Evelyn C. Pearce, Sister Tutor at the Middlesex Hospital, states in "A General Text Book of Nursing," that for gastric lavage employed for washing poison out of the stomach, large quantities of fluid should be used. Dr. Marriott advocates the use of either Trendelenburg's position on an operating table, or having the patient lying prone on a couch, with his head supported over the end. In these positions, there is no danger that the regurgitation of fluid around the tube in the pharynx will fall into the trachea, which happens in unconscious cases when the cough reflex is absent. "A patient in whom the swallowing reflex is absent should be fed by means of the nasal tube."

QUESTION FOR NEXT MONTH.

Describe the nursing of an unconscious patient, and the dangers of unconsciousness.

SOME NOTES UPON SHORT-WAVE THERAPY.

BY ISOBEL M. HUTTON, B.A., S.R.N.

For many months past much has been written in the medical press concerning the so-called "short" or "ultra-short" wave therapy, and even in the lay press there have appeared articles about the treatment of disease by "wireless." All physical methods of treatment have tended to become the business of specially trained nurses, nevertheless, to the general-trained nurse everything new is of interest.

The designation "short wave" is apt to be misleading. Waves are electro-magnetic vibrations in the ether, or any conducting medium. There are very many different types of waves within the electro-magnetic spectrum. Many of them have been tried in the treatment of disease and have been proved of value. The length of the waves vary from the infinitely small gamma rays of radium, which are measured in ten thousandths of a millimetre, to the Hertzian waves employed in wireless transmission, which reach into hundreds of kilometres. Their speed of travel is always the same, namely the speed of light, but the number of vibrations per unit time can vary, and the term "frequency of oscillation" is used to denote this. The so-called "short" waves are only short in comparison with the longer Hertzian waves. They vary from a few centimetres to about a 100 metres in length and they bridge the gap in the electro-magnetic scale between the infra-red rays and the waves used in wireless transmission. The various types of waves have totally different effects upon the body. The closest approximation to the short-wave transmitter as regards the type of wave produced and the effect upon the body is the diathermy apparatus. Waves of a similar or rather greater length are used in diathermy, but the frequency of oscillation is only about one hundredth of that of the short waves, but even so the electric current alternates at the rate of over a million oscillations per second. Both treatments employ, therefore, very high frequency electric currents to produce certain effects in the body, of which the most important is the heating of the deeper tissues.

Most nurses are familiar with the diathermy apparatus whereby the patient's body is placed in connection with an electric circuit, the electrodes being placed on the skin, or on a pad laid upon the skin. The electric current passes between the electrodes by way of the body, which acts as conductor. Unfortunately, all tissues do not conduct electricity equally well and the current tends to follow the line of least resistance, the blood stream and the cerebro-spinal fluid being specially favourable in this respect. Heating is produced where the current meets with resistance. The skin, the fatty tissues and bone offer the strongest resistance, but, with the exception of the skin where the current has to enter, these tissues are apt to be avoided by the current, which follows the more vascular layers. As a means of producing heat in the deeper tissues of the body, therefore, diathermy is not entirely successful. It is claimed that, by means of the short-wave apparatus the disadvantages of diathermy have been overcome and heat can be produced in the body in whatever part it is desirable. The apparatus

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