OUR PRIZE COMPETITION.

WHAT IS AN EMPYEMA? WHAT OPERATIONS ARE UNDERTAKEN FOR ITS RELIEF, AND WHAT HAVE YOU TO SAY ABOUT THE AFTER-NURSING?

We have pleasure in awarding the prize this week to Miss E. A. Noblett, 3rd Northern General Hospital, Headingley, Leeds.

PRIZE PAPER.

A collection of pus in the pleural cavity is known as an empyema.

An empyema is frequently due to the pleuritic effusion becoming purulent, or it may be *primary—i.e.*, purulent from the beginning. When pleurisy is a sequela or complication of the infective fevers or pyæmic state, it nearly always becomes purulent; also if pleurisy is a result of pneumonia it is usually purulent from the start.

The treatment of empyema is surgical, and consists in free drainage. A portion of one or two ribs is removed, and a soft drainage tube or soft-rubber bobbin is inserted. If a soft-rubber tube is used, it is fenestrated, and a safety-pin is put at right angles through the outer end to prevent the tube from slipping into the pleural cavity.

It is not now usual to wash out the pleural cavity, but some surgeons do so. It is apparent that each time the washing fluid is passed in, the same hydraulic conditions as in the original empyema are re-established for the moment, and then drained off. This alteration must in some degree cause shock. After the operation a very voluminous dressing of sterile pads is applied, and held by a swathe. These pads require changing usually within the first hour, and perhaps every two or three hours in the first twenty-four; after that, the amount of drainage may become rapidly less.

The patient should be placed in bed with the drainage opening downwards—that is, he is placed on the affected side with a slight inclination backward; the first criterion in posture, however, being the position in which breathing is least difficult. The tube must frequently be probed with a sterile instrument, to see that it has not become plugged with fibrin or blood-clot. It is kept in position about a week, and if drainage is then profuse, still longer.

These patients should be carried almost immediately out of doors, and are best sitting up. If adequate protection and nursing can be provided, they should sleep out of doors. Lung exercises, such as deep breathing and blowing fluid from one bottle to another, is started as early as the end of the first week.

The duration of drainage in these cases varies with the condition of the patient, the amount of pleural or lung disease, and the surroundings. Dust-free air, as in the country or at the seashore, together with maximum sunshine, are the best tonics.

The Bier hyperemic cup is of great value used daily from the time of removing the tube till the sinus is healed.

If the characteristic fluctuations of the chart persist after operation, an encapsulated empyema, not drained by the operation, is suspected. Sometimes the surgeon introduces his finger through the wound to break up the adhesions and so drain such a cavity; at other times a second opening is made. Encapsulated empyema, which is not reached by operation, may at any time rupture into a bronchus, or through the diaphragm into the peritoneum, or into an adherent colon; also death may result from toxemia.

In left-sided empyema, where the heart has been displaced, collapse and death are most likely to occur at the moment of escape of pus during the operation, when the heart suddenly assumes its normal position. The pus is allowed to escape slowly, and the cardiac condition closely watched at the same time, with stimulants at hand.

When every effort is made to aid the lung to expand and fails, Estlander's operation is performed.

In some cases it is necessary to give vaccine treatment. During convalescence, nourishing diet should be given.

HONOURABLE MENTION.

The following competitors receive honourable mention :—Miss N. C. Ashley, Miss L. C. Cooper, Miss H. Tong, Miss W. E. Rudman, Miss M. James, Miss P. Robinson.

Miss Tong gives the following method of preparing the skin for aspiration :—After the nurse has thoroughly scrubbed her hands, she should cleanse a good area near the lower angle of the scapula with ether, methylated spirit, or turpentine. Paint with tincture of iodine, and apply a sterile swab and bandage.

Miss Rudman writes :—Previous to an operation the affected part is usually explored, either with an exploring needle or with an aspirator. This is to know if pus be present.

Miss Ashley writes :—If the pus is not too thick, it *may* be drawn off by aspiration, but it is more often necessary to make an incision into the pleura.

QUESTION FOR NEXT WEEK.

Mention some of the different agents employed in applying counter-irritation, and describe the methods of their application.

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