If radiating pain follows spinal puncture the needle should be moved before injecting the drug. Persistent bloody tap contraindicates injection of the spinal anesthetic drug. When a desired height of anesthesia has been difficult or impossible to obtain a spinal block should be suspected. Residual anesthetic solution should be removed at the termination of such anesthesia by irrigating the subarachnoid space with isotonic solution of sodium chloride.

Spinal fluid dynamics should be carried out when the patient complains of intractable back pain or pain which seems out of proportion to the circumstances of his condition. When the complication results the degree of nerve involvement as well as factors which might be responsible should be determined. Tidal irrigation of the bladder and effective enemas should be administered. Spinal fluid dynamics should be determined, residual anesthetic removed by irrigation, spinal punctures, repeated daily when indicated, and careful nursing should be included in the care of these patients. The recovery period is variable. 39 references.

F. A. M.


The anesthetist acts as a trustee to safeguard the patient's interests before, during and after the operation. The anesthetist should have well-defined duties. He should see that the patient is in as fit a condition as possible and that his outlook is a cheerful one. In cardiac cases the anesthetist should be able to evaluate the risk and recommend the safest anesthetic. In thoracic surgery, where the surgeon invades the anesthetist's territory, the anesthetist comes into his own.

In choosing the anesthetic the patient's wishes, the surgeon's preferences, the anesthetist's skill and the safety of the patient should be considered. The anesthetist must maintain the anesthetic equipment in perfect order and have it ready for use. Diagnostic lumbar puncture, oxygen therapy, blood transfusion service and
local anesthetic procedures can all be done by the anesthetist.

Instruction is second only to the actual administration of anesthetics in the duties of the anesthetist. All medical students should receive lectures and demonstrations in the administration of anesthetics. At least one question in the final surgery examination should have an anesthetic reference and in the oral examination one question on elementary anesthesia should be asked by an anesthetist. The anesthetist should have a voice on the medical committee which manages the hospital. He should have equal rank and equal pay with members of other medical specialties. The anesthetist should be the buffer between the surgeon and the many details of a smooth working operating team.

F. A. M.


Anesthesia for operations inside the chest is complicated by more or less extensive disease of the lung. With the chest open the anesthetist is faced with the problem of maintaining normal circulation and respiratory exchange as well as counteracting a possible mediastinal shift. To overcome these difficulties some form of artificial respiration becomes necessary. "Controlled" respiration or "assisted" respiration are two methods used during open chest operations. Endobronchial insufflation is an alternative method now little used. Should a broncho-pleural fistula occur the remedy is a constant flow of fresh gases under pressure.

Before operation postural drainage and breathing exercises may be suggested. For minor operations on the chest wall light general anesthesia or local infiltration may be used. Local anesthesia is used for thoracoplasty for pulmonary tuberculosis. Fairly heavy premedication is produced with papaveretum gr. 1/3 and seopolamine gr. 1/150 with further intravenous injection of papaveretum according to the degree of depression observed in the anesthetic room. The local anesthetic solution may be nupercaine 1/2,000 and procaine 1/400 with fresh adrenaline 1/300,000. Where scapular retraction is needed, a brachial plexus block should be used. Paravertebral block is most satisfactory for anesthesia for the ribs. Intercoastal block is adequate for the lower ribs. These blocks are completed by subcutaneous infiltration of the line of incision.

When the pleura is stripped, paradoxical respiration and coughing may occur. The cough may be eliminated by an ipsilateral vagus nerve block. If the pleura is opened a general anesthetic should be given in order that respirations can be assisted. The late results with general anesthesia are less satisfactory than with local and hemorrhage is considerably more.

For major operations inside the chest wall the general anesthetic agents in favor at the present time are cyclopropane and ether. When controlled respiration is to be used with ether, the medulla should be depressed by the intravenous injection of morphine in addition to the usual premedication. Tracheal intubation, postural drainage, suction, bronchial insufflation or bronchial block, achieved by packing or insertion of a catheter into the main bronchus, are all used in combating secretions.

For lobectomy, pneumonectomy or extrapulmonary tumors where secretions are not a major problem, a face piece is often satisfactory. The mechanical stimulus of operations upon the heart under cyclopropane anesthesia may lead to ventricular fibrillation. Irregular pulse calls for local infiltration with procaine. If fibrilla-