

LUNDY, J. S.: *Editorial: Anesthetics Used in Connection with Roentgenology*. *Radiology* 43: 391-392 (Oct.) 1944.

"Only occasionally is the anesthetist faced with the necessity of administering an anesthetic agent while roentgenologic equipment is in use and sparks are therefore being generated. When such a necessity arises in the hospital, it is usually either in the operating room or the roentgenologic laboratory. Whatever the situation in the hospital, the anesthetist is always aware that where there is a spark there is danger of explosion. . . . The precautions are both positive and negative. Among the negative measures, the first can be stated in the form of a rule: No inflammable anesthetic agent should be administered in a room where roentgenologic equipment is being used. Accordingly, some of the commonly employed agents that should not be used near 'live' roentgenologic equipment include ether, alone or in combination with any other gas, ethyl chloride, and cyclopropane. Moreover, use of chloroform in these circumstances is not advised, although that agent is not inflammable. The darkened condition of the room makes it impossible to observe the patient well. Of the positive safety measures, perhaps the first is the following: When roentgenologic equipment is brought into the operating room, the regular machine for administering nitrous oxide, which is equipped with an ether bottle, should be removed from the room and a special nitrous oxide-oxygen machine, not equipped with an ether bottle, should be substituted. This same special machine is the one to be used in the roentgenologic laboratory if nitrous oxide is to be administered. Further positive measures have to do with the choice of agent or method and, in some cases, with dose and technic. . . . Where roentgenologic

equipment is in use, therefore, local, regional, spinal, or intravenous methods of anesthesia may be employed with agents appropriate to these methods; if it is desirable to employ the inhalation method, the agent should be nitrous oxide, combined with oxygen but without ether. Preliminary medication also is desirable. . . . An additional agent and method come up for consideration when a child who has aspirated a foreign body into the trachea is to be subjected to bronchoscopy. Under these circumstances solution of tribromoethanol (advertised with amylene hydrate) is administered by rectum, the usual dose being 100 mg. per kilogram of body weight. Preliminary medication is not used in such cases. . . .

"Intravenous anesthesia may be used where roentgenologic equipment is employed, but the agent must be given in small doses so that the patient's invisible breathing can be heard and anoxemia eliminated in as far as possible. Intravenous anesthesia, nitrous oxide 50 per cent and oxygen 50 per cent, and preliminary medication, make a safe combination that may be used under practically all circumstances. Probably this is the method of choice for use under the circumstances here discussed." references.

J. C. M.

SHANK, P. J.: *Empyema of the Lung: A Review of the Literature and an Analysis of One Hundred Sixty-nine Cases*. *Am. J. Surg.* n.s. 66: 224-244 (Nov.) 1944.

"Thoracic empyema patients, having a reduced vital capacity, are in a state of air hunger a greater part of the time, hence the anesthetic that gives the least pulmonary embarrassment should be selected. It must avoid reducing vital capacity below the level to which the patient has be-

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come accustomed during his illness; (2) allow lateral position of the patient on the operating table, on his sound side; (3) prevent loss of blood, as the thoracic wall is a very vascular bed; and (4) deal with the copious amount of sputum. Diagnostic and therapeutic aspirations can all be performed by local infiltration of novocaine or one of its derivatives. Rib resections can be done under local anesthesia, but some patients object to the cutting of the rib and a general anesthetic must be given. Maingot has found pure nitrous oxide oxygen anesthesia with a premedication of morphine and scopolamine very satisfactory. To overcome the collection of too much sputum, the patient is placed in a slight head down position. The mucus-producing quality of ether is a contraindication for its use. Ethylene is a good general anesthetic and seems to meet all these requirements. It has an added advantage of allowing a higher intake of oxygen. Cyclopropane maintains the highest percentage of oxygen in the circulating blood, which is so important in patients with reduced vital capacity. Unfortunately, in a certain percentage of patients who have cardiac lesions, it is contraindicated and may prove fatal by producing ventricular fibrillation. Positive pressure anesthesia should be used when the pleural cavity is opened. Endotracheal anesthesia and suction must be employed in the presence of copious amounts of sputum. Behrend has successfully used intravenous sodium pentothal with inhalation of 100 per cent oxygen in empyema complicated by bronchial fistula." 89 references.

J. C. M. C.

LUNDY, J. S.; ADAMS, R. C., AND SELDON, T. H.: *Usefulness of Various Anesthetic Agents in General Practice*. *Journal-Lancet* n.s. 64: 405-407 (Dec.) 1944.

"In attempting to indicate the usefulness of the anesthetics available at the present time, several factors must be considered. . . . We are assuming that in many . . . cases no experienced anesthetist will be available and that the situation may even be such that no physician or nurse can be obtained to give the anesthetic and that a layman may be called to assist. The physician may be entirely alone in providing care for the patient. The place where the anesthetic is to be administered will of necessity not be a hospital; it may be in an office, it may be in a home, it may be near the physician's office or at a distant point. . . . From the medicolegal angle the physician in charge of the case is responsible for the result of the anesthetic unless it is administered by another physician to whom the responsibility for the choice of anesthetic and its administration has been delegated by the operating physician. Juries decide these issues because most laws generally followed were made before the widespread use of anesthetics became common. The scarcity of physician anesthetists has made it impracticable to make specific laws to cover anesthesiology. . . . In so far as possible, the agents and methods will be considered in the order of their preference for use in your hands. The most preferred method is infiltration of the line of incision with a solution of procaine hydrochloride. A 0.5 per cent solution generally is used. Anesthesia for a great many painful procedures can be produced by infiltration. The technic in general is to infiltrate the tissue to be incised. One step frequently neglected is infiltration of the most superficial layer of the skin. Satisfactory anesthesia cannot be obtained unless this is done. Then, too, a few minutes—five to ten—should be allowed for the solution to soak through the nerve endings and nerve trunks in order to produce a good de-