

and the box. . . . There are several precautions to be taken in oxygen therapy. All tanks should be securely fastened to the patient's bed or on a tank carrier. Dust, water, oil or grease must be kept away from the connections, since any one of these may cause an explosion when subjected to the terrific pressure of stored oxygen. The tank should be 'cracked' to blow out any foreign matter which may be in the part before attaching the reducing valve. When opening a tank, the valve should be turned slowly until the indicator on the gauge comes to a stop, then the valve is given at least two complete turns. No smoking and no sparking apparatus can be allowed in the immediate vicinity of oxygen-enriched atmosphere. This precaution must not be minimized since the safety of others is at stake." 9 references.

J. C. M. C.

PATON, C. N.: *Anaesthesia in Labour and Caesarean Section*. M. J. Australia. 2: 589-593 (Nov. 15) 1947.

"The essential requirements of a satisfactory analgesic in the first stage are that it shall produce a substantial amount of relief from pain without loss of activity on the part of the primary or secondary powers or of the patient's ability to cooperate. A high degree of amnesia should also be achieved. The short-acting barbiturates stand high in popular favour for this purpose. . . . All authorities are agreed that the danger of foetal respiratory distress is increased if morphine is administered later than the third hour before delivery, and further, that the use of morphine in premature labour doubles the rate of foetal mortality. . . . Pethidine or 'Demerol,' a synthetic ethyl-ester of piperidine, has become increasingly popular as an obstetric analgesic in recent years. . . . Trichlorethylene is another recent addition to the drugs

available for the first-stage analgesia. . . . In severe toxæmia intravenous sedation is well established by means of . . . 'Pentothal Sodium.' . . . Paraldehyde has a powerful amnesic effect and a less pronounced degree of efficiency as an analgesic. . . . Rectal analgesia enjoys wide popularity in the United States of America. . . . 'Avertin' has long been abandoned because of unsatisfactory results. Ether is given in the form of a small enema. . . . As the passive first stage of labour passes into the active second stage, analgesia must be replaced by light surgical anaesthesia of an intermittent type, gradually deepening to full surgical anaesthesia with complete relaxation for delivery. . . .

"Chloroform has been in constant use for second-stage anaesthesia for one hundred years; but despite this it has many disadvantages. . . . Ether has but one advantage as an anaesthetic agent in second-stage anaesthesia, and that is the extreme relaxation for delivery which it gives. . . . Nitrous oxide and oxygen probably provide the best form of analgesia for second-stage labour when properly administered. . . . Low spinal anaesthesia was first used in obstetrics as long ago as 1900, but has not been generally accepted. . . . Continuous caudal anaesthesia, used for surgical purposes since 1901, was developed and adapted to obstetric practice by Hingson and Edwards in 1942. . . . Administration appears to be difficult and hazardous, and this fact must confine the use of this form of anaesthesia to large obstetric institutions and to small groups of specially trained operators. Intravenous anaesthesia for delivery is being more widely used, and provided delivery is carried out expeditiously and efficiently, the dose used should be moderate and insufficient to affect the foetus adversely. . . . Caesarean section is now widely used as a means of delivery. . . . No

one form of anaesthesia is applicable in all cases. . . .

"From this brief outline it must appear that no perfect form of obstetric anaesthesia has yet been devised, so many and varying are the requirements of the mother, child and obstetrician; but it may be fairly claimed that modern anaesthesia has, during the last two decades, done much to fulfill many of those requirements. Quite recently emphasis has been placed on the importance of the psychological preparation of the pregnant woman for the ordeal of labour—an ordeal which is rightly held to be as much mental as physical. The object of this psychological preparation is the elimination of fear and tension from the patient's mind, so that the element of pain is reduced to a minimum. There can be no doubt that its achievement must go far towards ensuring the success of whatever form of analgesia or anaesthesia is employed during labour." 15 references.

J. C. M. C.

PEČENIK, O.: *Influence of Steroid Hormones on the Sensitivity of Adrenalectomized Mice to Procaine*. Proc. Roy. Soc. 134: 218–226 (Mar. 25) 1947.

"Certain doses of procaine produce a fall of body temperature, the extent of which is independent of the other symptoms. . . . The experiments described below were concerned with the question whether the adrenal cortex protects against the alkaloid. . . . The experimental animals were castrated male or spayed female mice. . . . In male castrates the selected dose of procaine produced only an insignificant fall in body temperature before adrenalectomy. . . . After adrenalectomy the same dose of procaine, in untreated males, produced an irreversible collapse in body temperature. . . . Non-castrated males did not behave uni-

formly. Some reacted like castrates; in others the alkaloid was no more effective after adrenalectomy than before. Female castrates showed considerable variations before adrenalectomy in their response to procaine. After adrenalectomy, the body temperature fell steeply, on the average, regardless of whether the mice were anoestrous, or in artificial oestrus, or whether oestrogen together with physiological quantities of progesterone had been administered. Of the latter, none of 5 mice treated with 1 mg. and only 4 out of nine receiving 2 mg. of progesterone were protected. . . . This action of procaine, significantly intensified in adrenalectomized animals, is not the expression of a general hypersensitivity to the alkaloid. The collapse of body temperature was not, except in isolated cases, associated with clonus and paralysis, such as were produced by larger doses (from 20 mg./100 g.) in nonadrenalectomized mice. . . . The effect of procaine on the adrenalectomized animals was inhibited by desoxy-corticosterone acetate and by the sex steroids. . . . The mice treated with desoxy-corticosterone acetate were protected against consequences of adrenalectomy as long as the injected ester persisted in the body. . . . Adrenalectomized mice were not protected against procaine by thyroxin." 17 references.

J. C. M. C.

PLZAK, L. F.: *Modern Anesthesia*. Internat. Coll. Surgeons J. 10: 611–626 (Sept.–Oct.) 1947.

"The rapid advances made in anesthesia have paralleled those made in surgery. Numerous new agents and techniques have been introduced, so that a re-evaluation of the older agents and techniques is constantly necessary. Single agents are no longer used, but rather combinations of two or more agents that act upon different levels of the