

pane, in a very bad-risk patient. The second death on the table was in an elderly woman of 62, who had a fractured neck of femur, for which a Smith-Petersen pin was being inserted. Shortly after the reduction of the fracture this patient became an ashen-grey colour, and remained so throughout the operation, which lasted forty minutes. Her condition did not improve despite the fact that her respirations were ample, and the oxygen content of the mixture was kept high. Just as the operation was being finished she died. It seems as if death in this case was due to an embolic infarct in the pulmonary artery. . . . In midwifery, cyclopropane has no rival." 18 references.

J. C. M. C.

KRANTZ, J. C., JR.; CARR, JELLEFF; EVANS, W. E., JR., AND MUSSER, RUTH: *Anesthesia. XXII. The Anesthetic Action of Isopropyl Methyl Ether.* J. Pharmacol. & Exper. Therap. 87: 132-137 (June) 1946.

"In a former communication to this journal the authors demonstrated the availability of n-propyl methyl ether as an anesthetic. Since that time more than one hundred successful clinical anesthetics have been conducted with n-propyl methyl ether. A clinical study of anesthesia under n-propyl methyl ether has been recorded elsewhere. Accordingly it occurred to us to study the anesthetic properties of another isomer of ethyl ether, namely, isopropyl methyl ether. . . . Isopropyl methyl ether, an isomer of ethyl ether, is a volatile liquid exhibiting anesthetic properties when administered by inhalation to various species of animals. The potency of isopropyl methyl ether is approximately 25 per cent less than that of ethyl ether. In the dog, isopropyl methyl ether anesthesia produces no functional liver damage as

shown by the bromsulfalein test. In . . . experiments in the rat, dog and monkey, anesthetics with isopropyl methyl ether produced no histopathological changes in the liver and kidneys. Neither the monkey's nor the dog's heart showed any significant electrocardiographic changes under anesthesia with isopropyl methyl ether. The blood pressure of the dog remains essentially unaltered under anesthesia with isopropyl methyl ether.

"This isomer of ethyl ether compares favorably with ether as an inhalation anesthetic in several species of animals. Its increased volatility appears to compensate for its diminished potency. This first approximation of the anesthetic properties of isopropyl methyl ether, in our opinion, warrants its careful and judicious trial in man by skilled anesthetists. Extensive and intensive study alone in human anesthesia will reveal whether or not this mixed ether will warrant a place in the armamentarium of the anesthetist. . . . These experiments having been completed, we deemed that the properties of isopropyl methyl ether warranted its trial as an anesthetic in man. On March 22, at 4:00 p.m., one of us (J. C. K., Jr.) administered isopropyl methyl ether to an anesthetist, Constance Black, by the open drop method. The induction period was about 5 minutes. Light anesthesia was continued for 3 minutes. The recovery was rapid and uneventful. The induction period was not marked by any excitement." 8 references.

J. C. M. C.

GRUBER, C. M., AND KEYSER, GOLDIE F.: *The Response of the Isolated Frog Heart to Different Barbiturates.* J. Pharmacol. & Exper. Therap. 87: 104-108 (June) 1946.

"Although Roth noted the effects of certain barbiturates on the excised

hearts of elasmobranchs, and Johnston also studied the effects of some members of this group on the excised hearts of terrapin, no one seems to have made an extensive comparative study of the effects of the barbiturates on the excised hearts of frogs. . . . [In] 388 experiments . . . different concentrations of the barbiturates were tested on 64 excised frog hearts. . . . From [the] results it seems possible to divide the barbiturates studied into three groups, 1) those with marked cardiac depression; ortal and seconal, 2) those with moderate depression; amyltal, pentobarbital and neonal and 3) those with mild toxic effects; butisol, phenobarbital, evipal, vinobarbital and barbital. . . . All of the barbiturates studied depress the activity of the excised frog heart but they vary in the degree of this effect. A given concentration of one barbiturate such as ortal sodium or seconal sodium may cause complete stoppage of the heart whereas the same concentration of another barbiturate such as barbital, vinobarbital, evipal, butisol or phenobarbital may produce no noticeable change in either the rate or the height of contractions." 2 references.

J. C. M. C.

KAUFMAN, MANUEL: *The Preoperative and Postoperative Use of Sedatives and Narcotics in the Aged*. S. Clin. North America 715-717 (June) 1946.

"The indiscriminate use of sedatives and narcotics in the aged is undesirable. . . . In general, the lower level of liver and kidney functions which play such an important role in the breakdown and elimination of these drugs is responsible, in part at least, for the relatively poor tolerance to narcotics in the aged. Careful selection of a drug in proper dosage is desirable. The 'rule of thumb' that

children and the aged do not tolerate large dosage is to be respected. . . . Long-acting drugs, such as phenobarbital and barbital, depend on the kidney for excretion. It is important, therefore, to know the functional capacity of these organs before barbiturates are given. Impairment of either organ may cause a cumulative toxic effect from the use of the drug. . . . Paraldehyde, a central nervous system depressant, has a wide margin of safety and should be used more often. . . . Chloral hydrate, which is inexpensive and effective, is readily absorbed by the gastrointestinal tract and is detoxified in the liver and excreted by the kidney. It produces sound sleep. Used as a sedative or soporific, it is given in a dosage of 3/10 to 1 gm. Its unpleasant taste may be overcome by diluting it with milk, water or syrup of orange. The drug is contraindicated in severe liver, renal or cardiac disease.

"Official U.S.P. preparations of bromides are potassium bromide, calcium bromide, sodium bromide and ammonium bromide. Combinations of sodium, potassium and ammonium salts may be useful for chronic sedation. The average dose is 1 to 2 gm. twice daily. In the presence of dehydration, debilitation, prostatism, and impaired renal function, the preparation should be used with extreme caution because bromide intoxication can easily develop. . . . Morphine should be given subcutaneously in small doses. . . . Morphine should be used judiciously in patients who have debilitation, myxedema, anemia or pulmonary emphysema. Secondary effects from its action may be delayed for several hours to days. Larger doses cause mental confusion, respiratory depression, anorexia, vomiting and ileus. Codeine sulfate is about one-sixth as potent as morphine and is largely excreted in the urine. . . . Dilaudid has the same margin of safety as morphine. . . . Pantopon has no ad-