both groups. It is of significance, however, that in the ambulatory group the difficulty in voiding usually occurred during the night of the day of operation. Only two patients required subsequent catheterization after they were up and about." There were no cases of postoperative distention in the ambulatory cases.

It is interesting to note the choice of sutures used in this series. The author preferred nonabsorbable, interrupted sutures except in the peritoneum; also the use of wire or retention sutures. Most of this series was done with silk technic. "Proper and accurate coaptation of tissues, meticulous hemostasis, assiduous care in the prevention of infection, and gentle manipulation of tissues are undoubtedly of more importance than the nature of the material with which the wound is sutured."

The author discusses the value of early activity, insofar as it increases pulmonary ventilation, and the exercise of walking increases the circulation to the lower extremities, thus improving muscle tone and preventing thrombophlebitis. The psychologic aspect of early activity does a great deal to minimize the dread and fear of operative procedures for the patient. Short convalescence is insured and thus decreases the economic problems of the patient.

Conclusion: "Prompt restoration of surgical patients to normal life is an essential feature of convalescent supervision. Early postoperative activity and walking provide manifest modifications in customary convalescent care by which the process of reconditioning may be largely eliminated and early rehabilitation achieved.

"The indications for such a program are manifold; no contraindications are apparent in this study of 100 consecutive cases."

M. L. B.

KRANTZ, J. C., JR.: *Anesthesia—Man's Redemption from Pain.* Bull. Univ. Maryland School of Med. 29: 79-87 (Oct.) 1944.

"Pain is the arch enemy of mankind. All through the annals of written history man has ransacked this entire earth in order to acquire a surcease of pain. His real struggle began in the year 1776. . . . Prior to the time of Joseph Priestley mankind suffered tremendous pain in surgical operations. . . . Joseph Priestley had no idea that nitrous oxide would be useful in the alleviation of human pain and suffering. In the year 1800, at the turn of the century, Sir Humphry Davy remade Priestley's gas. . . . The scene shifts now across the Atlantic from England into this country. Four decades have passed and the year is 1844. The exact date is December 10th and in Hartford, Connecticut, a ripple of enthusiasm stirs throughout the town. A miracle worker is coming to town. He is Gardner Q. Colton, lecturer on chemical phenomena. He has a new gas and this new gas can make people act beside themselves. It can make a very peaceable man pugnacious. He can throw him into fits of anger. And that afternoon a dentist of Hartford, Connecticut had a flash through his scintillating intellect the idea of the possibility of using this gas in dentistry. . . . Time went on and Wells did not succeed in getting the use of nitrous oxide well established in his native town of Hartford. Owing to ill health he gave up his dental practice. . . . Crawford W. Long, a physician in 1841 heard of a liquid that was being used to cause people great exhilaration comparable to alcoholic inebriety and the young physician got interested. . . . Through the mind of Crawford W. Long flashed the possibility of using ether as an agent to relieve pain. . . . Out of the South the scene of general anesthesia pushed

Downloaded from http://asa2.silverchair.com/anesthesiology/article-pdf/6/5/546/...pdf by guest on ... April 2024

north and now it goes from the hands of a physician again into the hands of a dentist as we look in at the work of Dr. Morton, associate of Dr. Wells. In Boston, Morton had come in contact with a chemist whose name was Jackson. Jackson had anesthetized himself many times with diethyl ether and he informed Morton that ether was not particularly harmful, that one could take it—could inhale it, go under narcosis and awaken again apparently with impunity. And so Morton saw the possibility of using this substance in surgery. . . .

"Not to be outdone by the young republic on this side of the Atlantic, men in England began to look for substances as good as or better than diethyl ether. . . . Simpson had tried out many different compounds. They did not work. They were not so good as ether or they were poisonous, so he discarded them. One day as he was fumbling through the papers on his desk he came across a vial of colorless volatile liquid sent him by the German apothecary, Justus Von Liebig. He thought 'Oh, I have tried everything else. I might just as well try this chloroform which Liebig has suggested.' . . . It was, however, not until Victoria, who in England was more than a queen—she was an English institution—permitted chloroform to be used on her at the birth of her seventh son, Prince Leopold, that the voice of prejudice disappeared and chloroform took its rightful place among the general anesthetics. . . . There were nine barren decades in the field of general anesthesia and at the turn of the century one had Wells' nitrous oxide, Morton's ether, and Simpson's chloroform. . . . In 1922 ethylene was added to the list of general anesthetics. . . . In 1927 there was introduced into this country, coming out of the German laboratories, the compound known as avertin—tribromethanol. . . . In the year 1930 it occurred to the fertile mind of Chauncey Leake, now of the University of Texas, that it might be a prudent idea to combine ethylene, which is characterized by such a smooth induction, with ethyl ether, which is characterized by good and long abdominal relaxation. The compounds, the cross between the two, the hybrid molecule might have advantages, and so the compound was prepared divinyl oxide—vinethene as you know it today. Vinethene is useful in dental practice owing to the rapidity of induction. . . . In the year 1932. . . Lucas and Henderson, in looking for a better ethylene, succeeded in making cyclopropane and using it as a general anesthetic. . . . In the year 1937 it occurred to us at the University of Maryland Medical School that it might be a matter of prudence to unite if possible the molecules of cyclopropane and diethyl ether. . . . After a series of experiments lasting over a period of more than six years, we succeeded in producing separate and distinct anesthetic agents which in their general chemical structure may be considered to be a hybrid of molecules between ethyl ether and cyclopropane. The first of these was cyprome ether, not sufficiently better than ethyl ether to warrant any special merit. Then came cypreth ether. Cypreth was promising on rhesus macacus monkeys but its vapors were irrespirable by man. One could not inhale its vapors. Then by a series of chemical reactions we succeeded in making what the late Dr. Karl Connell calls trinity ether, because in one molecule there was cyclopropane, ethylene, and diethyl ether. We called it cyprethylene ether. We had great hopes for this compound, but there apparently was no satisfactory method of preparing it other than at a cost which made its use prohibitive. In our experiences in preparing cyprethylene ether we succeeded in

Downloaded from http://asa2.silverchair.com/anesthesiology/article-pdf/6/5/546/660276/0000542-194509000-00030.pdf by guest on 20 April 2024

making a compound which the chemist would call an isomer—i.e., it contains the same atoms, the same number of atoms but arranged differently in space. . . . Propethylene has been used hundreds of times. Its potency is about four times greater than that of ethyl ether, its concentration in the blood 25 mg. per cent under deep surgical anesthesia in contrast to 150 mg. per cent with diethyl ether. In it we believe we have developed a new principle in general anesthesia. Other volatile anesthetic agents enter and leave the body unchanged. Propethylene is partially broken down in the human body into acetone and acetic aldehyde, each substance being less toxic than propethylene itself. It is interesting after a two hour anesthesia, as the patient is being lifted to the surgical carriage, to see him open his eyes and regain complete consciousness. The boiling point of propethylene ether is 55° C. compared with 36° C. for ethyl ether, which makes it available in tropical countries where ether is difficult to administer. We do not know—only time will tell—whether in this centenary year of anesthesia we have added another useful anesthetic agent to the armamentarium of the anesthetist."

J. C. M. C.

NARANCIO, MARTIN MIQUEO; PIERSON, JOHN C.; MCNEER, GORDON, AND PACK, GEORGE T.: *The Economic Value of Peritoneoscopy.* Ann. Surg. **121**: 185–190 (Feb.) 1945.

"This relatively safe minor procedure will often prevent useless exploratory celiotomies in patients who are poor surgical risks. . . . Peritoneoscopy is generally indicated in the following conditions: Intra-abdominal tumors, particularly malignant tumors; cirrhosis of the liver; ascites of undetermined origin; tuberculous peritonitis; ectopic pregnancy; and lesions of the internal female genitals. The procedure is contraindicated in acute inflammatory conditions of the abdomen; advanced cardiac or pulmonary diseases; and extensive peritoneal adhesions. The single death in this series occurred in a jaundiced patient; this fatality, from slow, hidden intraperitoneal hemorrhage, would not occur now, with the routine employment of prothrombin estimation and vitamin K therapy. . . .

"The brief period of hospitalization is of economic significance to the patients."

A. W. B.

MART, J. A., AND MILLER, J. R.: *The Effect of Diathermy on Coronary Flow.* Am. Heart J. **29**: 390–393 (March) 1945.

"1. The effect of applying diathermy over the heart on the coronary flow of the dog was measured.

"2. As measured by this method, no significant increase in the coronary flow was demonstrated."

A. W. B.

WHALEN, E. J.: *Anesthesia in Peroral Endoscopy.* Ann. Otol., Rhin. & Laryng. **53**: 469–479 (Sept.) 1944.

"The seasoned endoscopist with deft technic may, by the judicious use of sedative drugs, be able to carry out most endoscopic procedures with the aid of a local anesthetic. . . . The choice of a preanesthetic agent is predicated on the type of anesthesia to be used and not on the nature of the surgery to be performed. . . . The purpose of the preanesthetic drug is manifold: to allay the fears of the patient, to reduce the amount of anesthetic required, to induce and continue a state of anesthesia, to dry secretions and to counteract the toxic effects of other drugs. . . . In practice, this ideal situation is accomplished by the use of morphine sulfate gr. ¼ and scopola-

Downloaded from http://asa2.silverchair.com/anesthesiology/article-pdf/6/5/546/609007/0000542-194509000-00033.pdf by guest on 20 April 2024