

tributable to the presence of a bunion and a hammer toe on the left foot as well as bilateral flat feet. In March, 1947, the bunion and hammer toe were surgically corrected. Spinal anesthesia with pontocaine was used. Preoperative neurologic examination was normal. Immediately after the operation the patient first noted difficulty with the right, the unoperated leg in the form of unsteadiness in his gait and an inability to raise the leg high enough to permit him to take a normal step. Occasional nonradiating pain in the right hip and in the back was also described along with fatigue in both legs, more marked on the right. The patient also experienced clonic movements in the right ankle when he stepped up. . . .

"The presence of pyramidal tract and cerebellar tract abnormalities with nystagmus, optic neuritis and the spinal fluid changes constituted a characteristic picture of multiple sclerosis which first became evident after the operative procedure. The medical as well as the legal implications of this problem emphasize the importance and value of a thorough neurologic review before a patient is subjected to spinal anesthesia."

J. C. M. C.

HARGER, R. N.: TURRELL, E. S., AND MILLER, J. M.: *A Viscosity-effusion Meter for Measuring the Concentration of Anesthetic Cases*. J. Lab. & Clin. Med. 34: 566-581 (April) 1949.

"Our apparatus is a modification of the device described in 1920 by Vichoff for determining the concentration of carbon dioxide in flue gas. . . . The Vichoff viscosity-effusion bridge has been employed by Jenkins for determining the levels of both oxygen and carbon dioxide inside an oxygen therapy chamber. Since ether also has a higher density and a lower viscosity

than air or oxygen, the differences being much greater than for carbon dioxide, this procedure, somewhat modified, was found to be admirably suited for the determination of ether. . . . The method was found to be satisfactory for the determination of nitrous oxide, cyclopropane, and ethylene in the presence of nitrogen or oxygen. . . .

"One also can use the apparatus to determine both nitrous oxide and ether and cyclopropane and ether when these pairs are present in the gas mixture, since one may selectively remove the ether, thus obtaining a second reading for the ether-free gas. However, since the total manometer drop exceeds the sum of the drops due to ether and nitrous oxide or ether and cyclopropane, it is necessary to employ a table or monogram constructed from observed manometer readings with various mixtures of ether-nitrous oxide or ether-cyclopropane in air or oxygen. Our data for this purpose are not yet complete."

J. C. M. C.

CULLEN, S. C.: *The Rational Application of Sedative and Analgesic Drugs*. J. Michigan M. Soc. 48: 169-173 (Feb.) 1949.

"If the physician is interested in the comfort of his patients as well as in their physical well-being, he can well afford to take the time necessary to administer a sedative and an analgesic drug prior to or concomitant with the diagnostic or surgical procedure. . . . All too often sedative and analgesic drugs are given to patients without any consideration of the pharmacologic properties of the drugs, without anything more than a cursory evaluation of the dose required, and usually because in some prior more or less similar situation the physician had seen the drug given. To obtain a consistently safe and satisfactory response to sedative and analgesic drugs, it is ex-

pedient to use the drugs according to their respective pharmacologic effects and in a dose and by a route that will give reasonable assurance of a minimum of unnecessary depression and give the desired effect promptly."

J. C. M. C.

MOSER, H. H.: *Early Anaesthesia*. *Anaesthesia* 4: 70-75 (April) 1949.

"Hypnos, the Greek god of sleep, son of Night and twin brother of the dread and bearded Thanatos, walks dreamlike as a youth, with winged brow and with poppies in his hands. His marble statue of Ancient Greece is now in Madrid and suggests to us by its symbolic use of poppies that the production of artificial sleep through drugs was well known to men of this period. Evidence of their knowledge can be seen in their art and literature. . . . Since prehistoric times men have performed surgical operations and used drugs to avoid pain, according to the degree of their culture. . . . In both the Talmud and the Bible we find references to drugs that induce sleep, but no mention is made of their exact nature. . . . The famous schools of Salerno and Bologna gained their knowledge from Greek and Roman sources. . . . In the school of Bologna in 1270 Ugo Borgognoni da Lucca and his son Theodoric Borgognoni used opium, hyoscyamus and mandragora with cicuta during operations. Their prescriptions are to be found in the *Antidotarium Parvum* of Niccolaus Praepositus in the 12th century. In the *Bamberger Antidotarium* (9th to 10th century) are to be found prescriptions and exact reports about the *spongia somnifera*. . . .

"Obviously many accidents occurred with anaesthesia especially as no exact dosage was prescribed, with the result that more and more voices were heard decrying the surgeons and their prac-

tice. Among these critics was Ambroise Paré. The use of anaesthesia consequently became infrequent, and finally came to an end. . . . As a result these prescriptions were forgotten and this early era of anaesthesia came to an end, until a new one of regulated dosage made its appearance."

J. C. M. C.

CHADWICK, T. H., AND SWERDLOW, MARK: *Thiopentone-curare in Abdominal Surgery*. *Anaesthesia* 4: 76-78 (April) 1949.

"We wish briefly to describe the results obtained in our last 100 consecutive abdominal cases and the lessons learned from them. Most of the cases were major ones, operating times varying between 12 minutes and 240 minutes. Following the technique of Gray and Halton, light premedication (morphine 1/6 gr. atropine 1/100 gr.), was given and in all the cases in this series anaesthesia was produced by the use of soluble thiopentone alone. Continuous oxygen was provided through a closed circuit machine and all cases were intubated. After injection of 15 mg. of curare, anaesthesia was induced with 0.5 g. of thiopentone, and, following a pause of 1-2 minutes, intubation was undertaken under direct vision. Great variation was observed in the state of the chords, some being relaxed while others were in spasm, in which cases intubation was usually effected during an expulsive cough. In eight cases it was necessary to give additional thiopentone or thiopentone-curare to effect easy intubation. The throat was then carefully packed to obtain a gas-tight junction and prevent stomach contents entering the trachea. Anaesthesia was maintained by thiopentone and curare. The last dose of curare was given not less than 20 minutes before the end of the operation. It was found necessary to give prostigmin and atropine only in the cases