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 practice. 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

where the operation was unexpectedly curtailed. . . .

"We have not found chest complications to be increased following this technique, but they have occurred in patients and operations where they might be expected. The incidence of postoperative vomiting is definitely diminished, and in our experience is mostly of minor degree. . . . In nine cases in this series, hiccough has arisen during the course of the operation. Hiccough is not necessarily associated with traction on the abdominal viscera. In one case it commenced during the closure of the peritoneum. It can frequently be stopped by a small dose of curare or pentothal. There were five deaths, all in 'poor risk' cases, within ten days of operation."

J. C. M. C.

PINSON, K. B.: *Mechanically Controlled Respiration in Thoracic Surgery.* Anaesthesia. 4: 79–87 (April) 1949.

"The Pulmonary Pump has now been in use for over 4 years, and valuable experience has been gained. The advantages of this method of conducting anaesthesia in chest surgery have become apparent. The apparatus consists essentially of two pumps, one of which takes over the respiration, while the other evacuates by suction secretion or pus from the trachea and bronchial tree. . . . The pump itself is provided with a method of adjusting stroke rate and volume, with large area release valves, and with a manometer. These devices have given no trouble and they effectively obviate the possibility of dangerous pressures, even if the patient should cough or resume active breathing efforts. . . .

"The average duration of operation was 3–6 hours, and of mechanically controlled respiration 1–9 hours. Pumping in all cases was continued until the operation was finished. The great majority were 'dry' cases. In most cases there was complete apnoea with no movement of diaphragm: in others slight movement, and in two or three a resumption from time to time of some efforts of respiration. . . . Suction was employed in all cases, and general was constant for 'wet' cases, being applied to the affected bronchus, and on the unaffected side to the bronchus or the lower end of the trachea. In almost all cases it was possible to keep the colour good. Towards the end of long operations the quality of the pulse often deteriorated; and not infrequently after the bandages had been applied and the patient put back to bed his condition would appear considerably worse than it had been 10 minutes earlier. This may be partly explained by the absence of such circulatory aid as the pumping had given; but a full explanation is wanting. In no case was it necessary to continue pumping beyond the end of the operation."

J. C. M. C.

BROWN, HARRY: *Anesthesia in Transthoracic Surgery of the Alimentary Tract.* Arch. Surg. 58: 679–683 (May) 1949.

"The achievements of transthoracic surgery in a large measure have been made possible by the concurrent advances in anesthesiology. . . . The choice of anesthetic agent or agents is secondary to the ability of the anesthetist to take care of the patient during operation. While it is possible with a tight face mask to maintain anesthesia, intubation of the trachea is preferred. . . . The technic of anesthesia usually is as follows: Prior to operation the surgeon discusses the general problems and the physical status of the patient with the anes-