change made in the patient's position every hour, he should be encouraged to breathe forcefully every hour, and carbon dioxide may be added to the oxygen occasionally. In order that invaluable information be not lost, and for the sake of uniformity, each surgical unit should be obliged from headquarters to keep records of each case, along standard lines, of all that specially pertains to anaesthesia." 9 references.

J. C. M. C.

BUTLER, T. C.: *The Delay in Onset of Action of Intravenously Injected Anesthetics.* J. Pharmacol. & Exper. Therap. 74: 118–128 (Feb.) 1942.

"The delay that occurs between the intravenous introduction of certain narcotics and the full development of their action has attracted relatively little attention and has not been satisfactorily explained. The first narcotic found to show this lag was α-d-glucochloralose. . . . The only drugs that I have found to have this property are chloraloses and 5, 5-disubstituted derivatives of barbituric acid and hydantoin. The lags of a number of these drugs have been measured at doses designed to give comparable depths of anesthesia. Among the eighteen 5, 5-disubstituted barbituric acids studied, it has been demonstrated that anesthetic dose and lag are associated properties, the more active drugs tending to have more rapid onset of action. This association might be explained if it were assumed that the delay is the time required for the drug to penetrate into or through the cell membrane, the more rapid penetration of the more active drugs being due to their greater relative solubility in the lipoids of the membrane. This hypothesis is inadequate to explain the unequal rates of onset of the antipodal arabinochloraloses. No reason is apparent for the fact that the property of slow onset of action is limited to those chemical classes named." 15 references.

J. C. M. C.

LONG, C. H., AND OCHSNER, ALTON: *Intravenous Pentothal Sodium Anesthesia: a Review of the Literature.* Surgery 11: 474–495 (Mar.) 1942.

"The successful use of pentothal sodium as an intravenous anesthetic by numerous groups, and its recommendation by some as 'one of the most valuable advances in the science of anesthesia that has been made in recent times,' make a thorough consideration of this agent mandatory upon progressive anesthetists and upon surgeons who assume part of the responsibility of directing the anesthetic control of their patients. This review is made in an attempt to evaluate this anesthetic agent. Since it is the opinion of many pharmacologists that there is slight hope of producing additional effective members of the barbiturate group, pentothal sodium may remain the barbiturate most acceptable for anesthesia. Various intravenous anesthetic agents had been used prior to the introduction of sodium pentothal. . . . The barbituric acid compounds were first introduced as intravenous anesthetic agents in 1929 when an attempt was made to utilize sodium amytal. . . . Although pentothal sodium had been developed earlier, by Tabern and Volwiler, it first was used clinically by Lundy at the Mayo Clinic during the latter six months of 1934. Since that time he and others have reported its use in 54,851 cases with almost universal praise of its anesthetic properties. . . .

"Pentothal sodium, or sodium ethyl (1 methylbutyl) thiobarbiturate, owes its success as an anesthetic agent to the fact that like evipal it belongs to the group of so-called 'light' or short-