

expedient of observing the anesthetized surgical patient. The "bulk of reported experience" could hardly be useful in evaluating that which was totally different.

We make no spectacular claims about the value of serial hematocrits by themselves. Our paper carefully points out how they must be evaluated in the light of other clinical data, such as pulse, blood pressure, urine output, and observation for possible sources of fluid and blood loss.

Many reputable clinics greeted our findings with skepticism. We suggested they try our system for themselves, to observe what occurred in their own operating rooms and to let us know what they found. The answer in each case has been overwhelming agreement with our findings.

There is need for further research into the physiologic explanation for the more rapid

fluid shifts in the anesthetized and postanesthetic surgical patient than in the awake volunteer and animal. We know, from the thousands of observations, that it does occur. We believe this may be because of prolonged relaxation of the arteriolar and capillary bed during and after anesthesia.

We don't doubt that the letter writers found that maximum hemodilution did not occur in their laboratory rats until eight to 12 hours following hemorrhage. We suggest that they now observe hematocrits in a series of anesthetized surgical human subjects. We would be interested in their findings.

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EEG Patterns During Halothane Anesthesia

To the Editor.—ANESTHESIOLOGY (23: 147, 1962) contains an abstract of a "Work in Progress" presentation by S. J. Galla and associates. These workers state that they were unable to reproduce our EEG patterns of halothane anesthesia. The explanation would appear to be that they never obtained deep anesthesia in spite of their recorded arterial concentrations. In view of the fact that the patients were respiring spontaneously and ventilation and circulation were stated to be satisfactory, these patients could not have been deeply anesthetized. Anyone experienced in the 1956 era of halothane using uncalibrated vaporizers in the circuit of a circle absorber knows what happens to respiration and circulation with deep halothane anesthesia. If Dr. Galla will use the technique we did, and especially controlled respiration which is required to obtain very deep levels of anesthesia, then he will experience the hazards of deep halothane and will see the EEG patterns which we described.

We made several references in our article (Canad. Anaesth. Soc. J. 4: 289, 1957) to the

possibility that the deeper levels or patterns 5, 6 and 7 were always accompanied by severe hypotension and this may have influenced these patterns. They will also note that we found apnea at level 4 and required controlled respiration to obtain the deeper levels.

Robson and Sheridan (*Anesth. Analg.* 36: 62, 1957) appear to have found the same patterns as we did; they did use vasopressors to support the blood pressure which we did not do. These workers also obtained and correlated the arterial concentrations with their EEG patterns and their blood concentrations were much lower than those recorded by Dr. Galla. Dr. Galla may have overlooked this paper by Robson and Sheridan which was published after our work and without prior knowledge of our experience. Brechner (Brochure, Edin Division of Epsco Inc.) has published tracings similar to ours which also show periods of complete electrical silence which Dr. Galla stated he could not obtain.

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