as little as 75 mg. 5 illustrative case records.

A. W. F.

LONG, CARROLL H.; MICKAL, ABE, AND OCHSNER, ALTON: *Use of Pentothal Sodium for the Induction of Anesthesia in Thyrotoxicosis.* Am. J. Surg. **55**: 71–74 (Jan.) 1942.

In a series of 50 consecutive thyroidectomies, 25 patients received anesthesia induction by intravenous pentothal sodium supplemented by one or more of the anesthetic gases by inhalation. The remainder were anesthetized by inhalation anesthesia alone.

A statistical study of these patients demonstrates in the group receiving the intravenous barbiturate a constantly lower pulse rate and temperature level during the postoperative period.

Unexpectedly, the accumulated data reveal a shorter postoperative reaction time in the group receiving the pentothal sodium. 3 references.

A. W. F.

RICHARDS, R. K.; KEUTER, K., AND KLATT, T. J.: *Effect of Vitamin C Deficiency on Action of Different Types of Barbiturates.* Proc. Soc. Exper. Biol. & Med. **48**: 403 (Nov.) 1941.

We have studied the effect of vitamin C depletion upon the action of different barbiturates, using barbital as a long-acting member, nembutal as a short-acting drug and pentothal sodium as an example of ultra-short action. The barbiturates were administered intraperitoneally to guinea pigs and their sleeping time observed. The animals were then placed on a vitamin C-free diet for thirty-three days and during this period the effect of injection of the barbiturates was re-determined.

There was no significant change with either barbital or pentothal, but under nembutal the sleeping time was prolonged by vitamin C deficiency. In these latter animals administration of vitamin C promptly restored normal sleeping times.

Since it is known that vitamin C deficiency causes depletion of liver glycogen, we investigated whether or not low glycogen might have been responsible for the changes observed. Marked fatty changes in the liver are also known to follow vitamin C lack. In our hands, there appeared to be no correlation between low glycogen content or high fat and prolonged sleeping time. Nor were we able to find any histological changes in the livers of our vitamin C deficient animals such as can be demonstrated after administration of such substances as chloroform or carbon tetrachloride.

We have therefore reason to believe that vitamin C may be directly or indirectly connected with the destruction of the short-acting barbiturates such as nembutal. It is possible that failure of liver enzymes accounts for the slower destruction of these drugs, but as yet no evidence is available on the point.

The experiments further substantiate the belief that the metabolism of pentothal is essentially different from that of nembutal and related compounds, and that the liver plays little part in this process.

R. D. D.

BATTEN, DOUGLASS H.: *Hypoxia—The Hazard of the Operating Room.* Am. J. Surg. **55**: 83–87 (Jan.) 1942.

From the practical standpoint there are six factors which are of paramount importance in the prevention of hypoxia:

1. The avoidance of the promiscuous use of respiratory depressant drugs.

2. Nitrous oxide should never be given with less than 20 per cent of oxygen. If sufficient depth of anesthesia cannot be obtained with this mixture another agent should be employed.