

vaporization and thus produced some degree of self-regulation. If an increased oxygen concentration was desirable a flow of oxygen was directed into (7) or (10).

Induction of anesthesia was usually accomplished by thiopental, although it was found possible with ether-air alone. Attempts at endotracheal intubation in the apneic patient following ventilation with air or ether-air, had to be limited to periods of about 30 seconds, in order to prevent hypoxia.

For major abdominal surgery, extremely

light anesthesia or analgesia was successfully maintained for many hours in the curarized artificially ventilated patient by leaving (7) unclamped and (8) partially clamped.

With the use of this assembly anesthetists with some experience could provide rapidly reversible safe anesthesia and excellent relaxation for major surgery. [Supported by the Surgeon General, Department of the Army, Contract No. DA-49-007-MD-858 and by the Johnson & Johnson Co., New Brunswick, New Jersey.]

CORRESPONDENCE

"Hypercapnia" versus "Hypercarbia"

To the Editor.—When referring to arterial carbon dioxide tension it is a pity that the terms hypo or hypercarbia cannot be generally adopted. In the article on "Hyperventilation with Oxygen—Possible Cause of Cerebral Hypoxia" (ANESTHESIOLOGY 21: 135, 1960) the words "hypocapnia" and "hypocapnea" occur in two consecutive paragraphs. One has to reread the second paragraph carefully to be sure whether or not the author is referring to a disturbance of respiratory volume but it seems that he still means a low carbon-dioxide tension. He would have avoided this pitfall by using the word "hypocarbia" which, I believe, is etymologically more correct.

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To the Editor.—In reference to Dr. Lewis' letter, the use of the word acapnia (to mean decreased CO_2 and later more properly called hypocapnia, just as anoxia came to be termed hypoxia) is puzzling in itself, for it comes from a Greek root *kapnos* meaning smoke. Why should CO_2 be compared to smoke? I have not tried to track this down.

But Yandell Henderson was using the term acapnic shock years ago.

Dr. Lewis quite correctly objects to the word hypocapnea which (unless it was a typographical error) demonstrates a confusion on the part of the author by introducing the root pneo from which comes pneumonia, hyperpnoea, and so on. Although hypo- and hyper-capnia are all right, I agree with Dr. Lewis that hypo- and hyper-carbia would be better because you then avoid the confusing similarity in sound of -pnea and -pnia. There are, naturally, objections to the carbia words. Carbia comes from a Latin word for charcoal, about as far away from, or as close to, CO_2 as smoke. A further objection is that these words combine Greek prefixes and Latin nouns. To get around this you would have to say sub- and super-carbia.

I have found several instances where in the same book or paper the words hypercapnia and hypercarbia (or hypo) are used interchangeably. I think capnia or carbia are equally correct. I prefer carbia.

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Halothane in Low Flow Systems

To the Editor.—In a recent article, (Pearcy, W. C.: Cost of Halothane Anesthesia in Low Flow System, ANESTHESIOLOGY 21: 32, 1960)

it was stated that the halothane output from the Copper Kettle of a standard Foregger anesthetic machine was estimated at 25 per