

creasing the duration of anesthetic exposure and manipulation solely in order to obtain data on abnormally prolonged induction-delivery intervals? (page 492).

Finally, nowhere is it indicated to what extent, if any, the patients were informed of the contemplated studies, the risks to themselves, and their unborn infants, or whether consent to the studies was in fact obtained.

In view of the above considerations, I believe that the investigations were unnecessary in terms of the likelihood of developing new information, that any new information which might have been obtained would not have represented a significant contribution to health care, the studies were improperly designed and the results inadequately evaluated, and that it was unethical to subject the mothers and infants to the increased risks involved even if properly informed consent were obtained. I strongly urge that ANESTHESIOLOGY insist on compliance with ethical standards for human experimentation in all investigations accepted for publication.

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EDITOR'S NOTE

The Editorial Board has not found it easy to establish an all-inclusive policy regarding the publication of papers in which human experimentation is involved. As this matter has been aired, our task has been made easier by the investigator's assumption of the basic responsibility for proper conduct in this sphere. We, too, accept the responsibility. We are helped in our resolve to support the basic principles of ethics in human experimentation by letters such as that of Dr. Fletcher and that of Dr. Beccher, published in the March issue of the Journal.

The Bohr Equation

To the Editor:—In a recent article (ANESTHESIOLOGY 31: 575, 1969), Kuwabara and Duncalf have revised Enghoff's modification of the Bohr equation,

$$\frac{V_D}{V_T} = \frac{P_{aCO_2} - P_{E}CO_2}{P_{aCO_2}}$$

to account for the fact that when the physiologic shunt is greater than 20%, the P_{aCO_2} will be significantly different from $P_{E}CO_2$ to make the standard Bohr equation give a falsely high V_D/V_T .¹

The final result,

$$V_D/V_T = \frac{\left(P\bar{V}CO_2 - \frac{P\bar{V}CO_2 - P_{aCO_2}}{1 - \dot{Q}_s/\dot{Q}_t} \right) - P_{E}CO_2}{P\bar{V}CO_2 - \frac{P\bar{V}CO_2 - P_{aCO_2}}{1 - \dot{Q}_s/\dot{Q}_t}}$$

although mathematically correct, is cumbersome and difficult to commit to memory. To overcome these objections I present the following modification of their derivation. Starting with their same assumption:

$$P_{aCO_2} = \dot{Q}_s/\dot{Q}_t P\bar{V}CO_2 + (1 - \dot{Q}_s/\dot{Q}_t) P_{E}CO_2 \quad (1)$$