ABSTRACTS

Editorial Comment: A fixed style of presentation for this department of Anesthesiology has purposely not been defined. It is the wish of the Editorial Board to provide our readers with the type of abstract they desire. Correspondence is invited offering suggestions in regard to the length of abstracts, character of them, and source of them. The Board will appreciate the cooperation of the membership of the Society in submitting abstracts of outstanding articles to be considered for publication.


"The purpose of this article is to bring forward, with the aid of illustrative series of cases, some facts about post-anaesthetic vomiting which are well recognized, and some which I think have been less well recognized in the past. . . . First, taking as a basis 1,000 consecutive cases, the following figures for the incidence of post-anaesthetic vomiting were obtained: Nausea only 2.6 per cent. . . . Vomited once only 13.7 per cent. . . . Vomited 2 to 5 times 20.0 per cent. . . . Vomited more than 5 times in less than eighteen hours 6.5 per cent. . . . Vomited more than 5 times in more than eighteen hours 0.8 per cent. . . . As might be expected, the use of nitrous oxide, oxygen, and ether produces the highest incidence of post-anaesthetic vomiting. But it is rather surprising to find that the preliminary addition of pentothal sodium (the dose varying from 3.5 to 12 c. cm. of 5 per cent solution) reduces the incidence by almost 20 per cent. . . . Contrary to the opinion of some anaesthetists, the addition of cyclopropane to the anaesthetic sequence appears to have little effect on the post-anaesthetic vomiting rate. . . . It has been generally recognized that males tend to vomit less than females, but the difference is rather greater than expected. . . . The ratio was 68.6 females to 45.5 males; with the addition of pentothal sodium it became 56.5 to 26. . . . In a series of minor gynaecological operations, all of which included dilatation of the cervix, the post-anaesthetic vomiting rate was 64 per cent, a figure which suggests that the factor causing the raised vomiting rate is the dilatation. . . .

"The treatment of post-anaesthetic vomiting, while not within the scope of this article, requires one or two notes. It is as much pre-operative as post-operative. The co-operation of the nursing staff in reassuring the patient can bring about a most gratifying reduction in the figures obtained. The usual lines—absence of food in the stomach, pre-operative glucose, fluids, and avoidance of excessive purging—may be followed with success. . . . Pre-medication should be suitable and adequate, and be combined with the administration of a basal hypnotic. In this connexion attention should be drawn to the fact that the substitution of omnopon for morphine in the pre-medication reduces the incidence. Individual susceptibility to morphine appears to be a very definite entity. Adequate doses of atropine or hyoscine will prevent secretion, and possible swallowing, of ether-impregnated saliva and mucus. . . . The post-operative supply of fluids in all cases in which fluid loss during operation has been in any way excessive, whether by actual blood loss or by sweating, will also reduce the incidence of post-operative.
vomiting. The rectal or even oral administration of normal saline to the point at which the patient complains has proved to be an effective measure, which may be further enhanced by the addition of glucose. The patient should be moved as little as possible on his return to bed. ... Apart from any other consideration, anoxaemia seems to be a pronounced predisposing factor in the causation of vomiting. Post-operative sedation should be applied, and the use of suppositories—e.g., nembutal—should not be forgotten. Vomiting which is actually occurring may be treated by a variety of remedies. Drinks of hot water, to which 10 to 15 grains of sodium bicarbonate may be added, strong hot black coffee, Lugol's iodine, and sips of champagne all have their measure of success. Lenevitch (1892) advised washing out the stomach with warm alkaline solution (sodium bicarbonate). Though suggested at such a relatively early date, this line of treatment has proved most efficacious, especially in cases of persistent vomiting.” 4 references.

J. C. M. C.


"Respiration is one of the more spectacular of physiological phenomena, owing for the most part to its ever presence, its subjective necessity and its striking variations. ... I should like to mention four aspects of respiration which are much emphasized in the literature of today. Only through the understanding of these can some of the disturbances in breathing, with ensuing effects on the whole body, be interpreted. . . .

"The question of oxygen deficiency, or anoxia, has been a confusing one for many years. Oxygen lack invariably depresses whatever tissues are subjected to this deficiency and yet it is every day knowledge that diminished oxygen pressure stimulates respiration. This is well seen in high altitudes or in a pressure chamber where the atmospheric pressure is gradually reduced. Here, then, is a serious conflict—stimulation of respiration in anoxia as opposed to the fact that oxygen-lack ordinarily depresses. Although explanations were given for this phenomenon, none was satisfactory until the Belgian School, led by Heymans, discovered the functions of the carotid and aortic bodies. Through brilliant experimentation it seems proven without question that oxygen-lack stimulates the sensory nerve end fibers in these bodies which carry impulses to the respiratory center and which, in turn, is stimulated as a result of these impulses and not because of the anoxia directly. Such a conception of a reflex does no violence to the physiological truism that oxygen-lack depresses. Further evidence for this is that if the anoxia is severe enough, the respiratory center is acutely depressed, then being unable to respond to the increased stimuli coming to it from the carotid and aortic bodies. Likewise, this conception does not oppose the evidence for the ultrasensitivity of the center itself to carbon dioxide or changes in pH as a result of changes in carbon dioxide. . . .

"The relation between stimulation of the respiratory center by carbon dioxide and the reflex effect of lowered supply of oxygen is well demonstrated in a group of experiments by Henderson. . . . The stimulating effect of carbon dioxide on respiration is now taken advantage of in the operating room and following surgical procedures. It seems hardly necessary to mention . . . the great usefulness of increased pulmonary ventilation following a period of lessened lung mobility. It seems without question that many cases of