

ABSTRACTOR'S COMMENT: The tenfold greater complications rate in IPPB patients makes one question how carefully the IPPB therapy was given. Where a study involves evaluation of IPPB therapy, documentation must be provided that the treatments were administered by adequately trained personnel. The author also makes no comment on the possible complications associated with the routine insertion of catheters through the cricothyroid membrane; e.g., hemorrhage and tracheal fistula.

HYPOXIA The path of oxygen from the environment to its ultimate destination in the mitochondria of the cells can be visualized as a series of steps forming a cascade from the inspired air to alveolar gas, arterial blood, systemic capillaries and, finally, the tissues and venous blood. Measurements of oxygen tension at specific stages of the cascade are used not only to pinpoint the primary site of hindrance to gas transfer but also to elucidate the pathophysiological causes for the disturbances in different forms of hypoxia. This approach is demonstrated with data from four clinical cases of patients who had different types of cardiopulmonary disorders, studied at an elevation of 5,300 feet. (*Luft, U. C., and Finkelstein, S.: Hypoxia: A Clinical-Physiological Approach, Aerospace Med. 39: 105 (Feb.) 1968.*)

HYPOXIA Use of a double-lumen oxygen-suction catheter is a predictably safe method for providing effective endotracheal suction. Oxygen washout by continuous suction is a theoretical problem in maintaining maximal arterial oxygen tension during suctioning, and probably accounts for some of the variability of increases in oxygen tension during the use of the double-lumen catheter. Effectiveness should be further increased, and higher arterial oxygen tensions maintained during suctioning, by modification of the suction apparatus to low volume, high flow, with a constant oxygen inflow. (*Berman, I. R., and Stahl, W. M.: Prevention of Hypoxic Complications During Endotracheal Suctioning, Surgery 63: 586 (April) 1968.*)

HYPERBARIC O₂ IN TETANUS Following the successful use of hyperbaric oxygen in *Clostridium welchii* infections, occasional cases of tetanus were treated by this method. Eight patients with severe tetanus were given a total of 19 hyperbaric oxygen treatments in a small one-man chamber. The two-hour treatments were complicated by spasms in the chamber which necessitated stopping six treatments early. After some treatments, there seemed to be some reduction in severity of the spasms, but more often there was no apparent effect on the disease. When CO₂ was added, the effect was more dramatic, resulting in cessation of spasms for from 12 to 16 hours. There is considerable hazard from CO₂ narcosis in these sedated patients, however, and one patient had respiratory arrest in the chamber. The mortality was six out of eight cases (75 per cent). (*Milledge, J. S.: Hyperbaric Oxygen Therapy in Tetanus, J.A.M.A. 203: 875 (March) 1968.*)

PULMONARY FUNCTION TESTING Exhaled nitrogen concentration and exhaled volume are commonly measured simultaneously to estimate anatomical deadspace and uniformity of distribution of inspired gas. Results of present study of healthy volunteers demonstrated that estimated deadspace was consistently lower and apparent distribution of inspired gas was more uniform during rapid exhalations. This was attributed to variations in sequence of lung emptying with different expiratory flow rates, and indicates the necessity to employ comparable expiratory flow rates for repeat studies in a given subject. (*Bashoff, M. A., and others: Effect of Expiratory Flow Rate on the Nitrogen Concentration vs. Volume Relationship, J. Appl. Physiol. 23: 895 (Dec.) 1967.*)

AGING AND LUNG FUNCTION At normal tidal volumes healthy elderly men exhibited a significantly higher degree of non-uniformity in intrapulmonary distribution of inspired gas than younger individuals. Functional residual capacity did not increase with age in this study and the observed nonuniformity in elderly subjects could not be ex-

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