Literature Briefs

John W. Pender, M.D., Editor

Briefs were submitted by Drs. John Adriani, C. M. Ballinger, Norman Bergman, Peter P. Bosomworth, Caylord Buchanan, M. T. Clarke, Martin Helrich, J. J. Jacoby, S. J. Martin, S. R. Occh, R. E. Ponath, Alan Randall, Wallace Ring, P. H. Sechzer, and H. S. Rottenstein.

Briefs appearing elsewhere in this issue are a part of this column. The "Briefs" of Russian Literature are taken from Excerpta Medica's "Abstract of Soviet Medicine," which is supplied through the Public Health Service of the National Institutes of Health.

THYROID REVIEW In a well-outlined, easily read, lucid manner, a review is presented of the chemistry, synthesis and fate of the thyroid hormones; regulation of thyroid function; laboratory diagnostic tests of thyroid function and disease; factors affecting thyroid function; physiological and pharmacological actions of the thyroid hormones, and management of hyperthyroid and hypothyroid patients from the standpoint of the anesthesiologist. (*Boutros, A. R.: Anesthesia and the Thyroid Gland: A Review, Can. Anaesth. Soc. J. 8: 586 (Nov.) 1961.*)

DIFFUSING CAPACITY Measurements of the diffusing capacity of the lungs for carbon monoxide were made by both the single breath and steady state method with end-tidal samples as a measure of alveolar carbon monoxide in normal subjects and in patients with cardiac or respiratory disease. In normal subjects at rest the steady state diffusing capacity was about 75 per cent of the single breath diffusing capacity. The steady state diffusing capacity increased with increasing tidal volume, so that at maximal tidal volume, the steady state diffusing capacity was approximately the same as the single breath diffusing capacity. The increase of diffusing capacity on exercise was greater than could be accounted for by the increased ventilation on exercise. An increase of respiratory rate without an increase in tidal volume did not increase diffusing capacity. The patients with cardiac or respiratory disease were considered in three groups. Those with normal pulmonary gas mixing had a steady state diffusing capacity which was 74 per cent of the single breath diffusing capacity at rest. Those with impaired pulmonary gas mixing, but no clinical evidence of emphysema, had a steady state diffusing capacity which was 66 per cent of the single breath figure. The difference between these two groups may be due, in part, to the errors in end-tidal sampling in patients with uneven pulmonary ventilation. In the third group, those patients with emphysema showed no relationship between the single breath and the steady state diffusing capacity. In the absence of emphysema either method gives a satisfactory figure for diffusing capacity. (*Apthorp, G. H., and Marshall, R.: Pulmonary Diffusing Capacity: A Comparison of Breath-holding and Steady State Methods Using Carbon Monoxide, J. Clin. Invest. 40: 1775 (Sept.) 1961.*)

PANLOBULAR EMPHYSEMA Panlobular emphysema is as common as centrilobular emphysema, the latter having the primary lesion associated with the respiratory bronchioles and the former characterized by diffuse overdistension of the air ducts and alveoli with consequent dissolution of their walls and formation of microbullous spaces up to and exceeding 500 microns in diameter. The centrilobular type is more common in the upper lung field, the panlobular type in the lower lung. The diffuse type may not be associated with pigmentation, but, when present, the pigment is often located in areas of alveolar wall fenestration. The centrilobular type shows dense pigmentation in the affected areas. While many cases are associated with other abnormalities such as kyphoscoliosis