

## BRIEFS FROM THE LITERATURE

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Briefs were submitted by Drs. C. M. Ballinger, L. E. Binder, T. H. Cannard, M. T. Clarke, R. A. Devloo, Cody Eames, J. E. Eckenhoff, Martin Helrich, S. J. Martin, J. L. McDonnell, R. W. Ridley and Alan Thorogood.

**PULMONARY CIRCULATION** The effects of sympathomimetic amines upon pulmonary circulation were measured in anesthetized dogs with open chests. Pulmonary vasoconstriction and increased blood flow resulted from norepinephrine and epinephrine. Vasoconstriction and decreased blood flow occurred after phenylephrine. Ephedrine and amphetamine produced a variable effect upon lung vessels and blood flow. A total of 13 vaso-pressor drugs were studied. (Arado, D. M., and Schmidt, C. F.: *Effects of Sympathomimetic Drugs on Pulmonary Circulation*, *J. Pharmacol. & Exper. Therap.* 120: 512 (Aug.) 1957.)

**NITROGEN "WASHOUT"** The idea of nitrogen elimination and its replacement by oxygen prior to nitrous oxide anesthesia is not new (Neff, et al., 1950), but its overall importance appears to be overlooked in practice. (Mostert, J. W.: *Nitrous Oxide Anesthesia Without Harm*, *Brit. M. J.* 1: 502 (March 1) 1958.)

**HYPERCAPNIA** Patients with obstructive pulmonary emphysema complicated by arterial oxygen unsaturation and carbon dioxide retention were studied to determine whether or not the depressed ventilatory response to inhaled carbon dioxide could be modified by the administration of salicylate or salicylate plus diazox. The effect of the administration of salicylate upon the respiratory depression following inhalation of high oxygen mixtures in patients with hypercapnia also was investigated. Results showed that oral acute and prolonged salicylate administration to these patients failed to improve the impaired ventilatory response to inhaled carbon di-

oxide so characteristic of this group of patients. Ventilatory depression following inhalation of high oxygen gas mixtures was not inhibited in these patients by salicylate therapy. (Samet, P., Rosenthal, A., and Bernstein, W. H.: *Effect of Salicylates upon Ventilatory Response to Carbon Dioxide in Patients with Pulmonary Emphysema and Hypercapnia*, *Am. J. Med.* 21: 215 (Feb.) 1958.)

**HYALINE MEMBRANES** Hyaline membranes appear as a secondary manifestation in lungs afflicted with a variety of abnormal conditions, and discovery of hyaline membrane in lung sections is no proof that any given entity is present. In the immediate postnatal period three conditions may be associated with hyaline membranes: (1) atelectasis of premature infants; (2) aspiration of vernix caseosa; (3) the contingency of maternal diabetes or obstetrical delivery by cesarean section. Since fibrin is the essential constituent of hyaline membranes, transudation or exudation of blood plasma into the alveoli always precedes their formation. Lungs of viable premature infants exhibit certain structural peculiarities which predispose them to poor expansion: (1) distended respiratory bronchioles and collapsed alveoli caused by surface tension phenomena, (2) a low ratio of capacity of alveoli to bronchi favoring the collapse of many alveoli with moderate loss of air from the lung. These properties, perhaps in combination with an alveolar transudate, initiate a vicious cycle once aeration has become inadequate. Some infants of diabetic mothers, some mature infants delivered by cesarean section and a few not belonging to either