Literature Briefs

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Briefs were submitted by Drs. C. M. Ballinger, Norman Bergman, Peter P. Bosomworth, M. T. Clarke, H. S. Davis, Deryck Duncalf, J. E. Eckenhoff, J. J. Jacoby, R. L. Klein, F. C. McPartland, W. H. Mannheimer, Alan D. Randall, Norman Rosenbaum, and P. H. Sechzer. Briefs appearing elsewhere in this issue are a part of this column. Abstracts of Russian and Japanese literature were obtained from Excerpta Medica Foundation.

RESPIRATORY-DISTRESS SYNDROME A premature, 1,800 g. infant developed a respiratory-distress syndrome the day of delivery. Nasotracheal intubation was performed with a 2.5 mm. tube and ventilation was accomplished with an East-Radcliffe respirator at 37 cycles per minute. Ten per cent glucose was infused intravenously as was sodium bicarbonate solutions. Artificial respiration resulted in immediate improvement in color and condition. Respiration was continued for three days with 65 to 85 per cent oxygen, on the fourth day was reduced to 40 to 50 per cent, and stopped at the end of 84 hours. Recovery was uneventful. (*Reid, D. H. S., and* Tunstall, M. E.: *Treatment of Respiratory-Distress Syndrome of Newborn with Nasotracheal Intubation and Intermittent Positive-Pressure Respiration, Lancet 1: 1196 (June 5) 1965.*)

PULMONARY INSUFFICIENCY Eighteen newborn infants who were moribund secondary to respiratory insufficiency were treated with prolonged mechanical breathing through nasal endotracheal tube; 11 survived. Longest period of successful respirator treatment was 9 days; the birth weight of the smallest surviving infant was 2.2 pounds. Tracheal intubation with a soft plastic tube is quicker and simpler than tracheostomy, and even if maintained for many days, may be less traumatic. A Bennett PR2 Respiration Unit fitted with an infant circle breathing system with a dead-space of less than 1.0 ml. was the respirator principally used. Respiratory rates between 40 and 70 per minute and peak pressures of between 20 and 40 cm. of water were required because of these babies' greatly reduced compliance. The feeble and very brief inspiratory effort of the smaller infants was often insufficient to trigger the respirator, and in such cases the machine was set to provide automatic cycling. Periods of manually assisted respiration with face-mask and Ayre's T piece were applied in the recovery period. Nutrition was best managed by feeding through a gastrostomy tube. Laryngeal and tracheal obstruction did not develop on extubation. (*Thomas, D. V., and others: Prolonged Respirator Use in Pulmonary Insufficiency of Newborn, J.A.M.A. 193: 183 (July 19) 1965.*)

LIPASE Postperfusion lung syndrome (diffused atelectasis and progressive respiratory insufficiency) has been related to the adverse effects of extracorporeal circulation on the alveolar lining layer. The stimulation of lipoprotein lipase by the use of heparin during these procedures might be a factor in this syndrome, since the lung surfactant is known to be a complex lipoprotein. (*Trimble, A. S., and others: Lipoprotein Lipase During Extracorporeal Circulation, Surgery 58: 324 (Aug.) 1965.*)

OXYGENATION Patients undergoing closed mitral valvulotomy were ventilated with mixtures of 99.5 per cent oxygen and halothane, or 50 per cent oxygen and 50 per cent nitrous oxide. Oxygenation was considered adequate when 99.5 per cent oxygen was administered. However, when 50 per cent oxygen and 50 per cent nitrous oxide were given, over half of the patients had arterial P_{O_2} values below 100 mm. mercury just prior