BRIEFS FROM THE LITERATURE

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Briefs were submitted by Drs. C. M. Ballinger, Lee S. Binder, John P. Bunker, M. T. Clarke, R. A. Devloo, J. E. Eckenhoff, Martin Helrich, J. R. Householder, R. E. Ponath, Alan D. Randall, R. W. Ridley and H. S. Rottenstein. Briefs appearing elsewhere in this issue are a part of this column.

UNEVEN VENTILATION Using an open-circuit method with 11 per cent helium and air as the indicator gas, the uneven ventilation of the lungs of 6 normal and 4 emphysematous patients was studied. Normal lungs can be said to behave as if about half their volume was half as well ventilated as the rest of the lung. Emphysematous lungs can be said to behave as if three-quaters of the lung was only about one-fifth to one-tenth as well ventilated as the remaining quarter. (*Briscoe, W. A., and Cournand, A.: Uneven Ventilation of Normal and Diseased Lungs by Open-Circuit, J. Appl. Physiol. 14: 284 (May) 1959.*)

DEAD SPACE The mean volume of the extrathoracic respiratory tract in 6 cadavers was found to be 72 cc. Retraction of the jaw with flexion of the neck produced a mean decrease in the dead space of 31.4 cc., while a protrusion of the jaw with extension of the neck increased the dead space by 39.7 cc. The extrathoracic dead space is at least equal to the intrathoracic dead space. Each approximates to a value in centimeters equal to one-half the body weight in pounds. (*Nunn, J. F., Campbell, E. J. M., and Peckett, B. W.: Anatomical Subdivisions of Volume of Respiratory Dead Space and Effect of Position of Jaw, J. Appl. Physiol. 14: 174 (March) 1959.*)

RESPIRATORY OBSTRUCTION Flexion of the thoracic spine in newborns was noted to cause varying degrees of respiratory obstruction relieved by placing a folded towel beneath the shoulders. In stillborns, obstruction to the flow or tracheal lipoidal was produced by flexion of the thoracic spine, but not of the neck. Radiography showed the site of obstruction to be just below the tracheal bifurcation. The obstruction was relieved by extension of the thoracic spine. Once the lungs were expanded blockage could not be demonstrated. This may help explain the usual lack of amniotic fluid in the lungs of the newborn despite intrauterine respiratory movements. (*Smith, A.: Obstruction of Respiratory Tract in Flexed Fetus, Brit. Med. J. 1: 344 (Feb. 7) 1959.*)

POSTURE Both lung compliance and functional residual capacity were proportionately reduced on resuming the supine from the standing position, so that the "specific" compliance remained the same at the two body positions. (*Lim., T. P. K., and Luft, U. C.: Alterations in Lung Compliance and Functional Residual Capacity with Posture, J. Appl. Physiol. 14: 164 (March) 1959.*)

RESPIRATORY ACIDOSIS Studies of renal bicarbonate reabsorption in acute respiratory acidosis have demonstrated a curvilinear rise in reabsorption as plasma bicarbonate concentration was progressively elevated. The average final value for bicarbonate reabsorption was 3.8 mEq. per 100 ml. of glomerular filtrate. Frank excretion of bicarbonate began at a plasma level of approximately 26 to 30 mEq. per liter. It has been suggested that during acute respiratory acidosis an enzymatic reaction involving carbonic anhydrase is rate-limited in the process of bicarbonate reabsorption. (*Schwartz, W. B., Falbriard, A., and Lemieux, G.: The Kinetics of Bicarbonate Reabsorption During Acute Respiratory Acidosis, J. Clin. Invest. 38: 939 (June) 1959.*)