

hormones, excessive intake of water or potassium-free fluids, and alkalosis. (Snively, W. D., Jr., and Westernman, R. L.: *Serum Potassium Determinations. A useful laboratory toll, J.A.M.A. 197: 579 (Aug.) 1966.*)

ALKALOSIS Post-traumatic alkalosis, in general, is a disorder of patients with good visceral (cardiac, pulmonary, renal) function whose prognosis otherwise is good. Acidosis, by contrast, is a manifestation of severe visceral failure, often precipitated by a low flow state and its attendant oliguria. Ventilator produced hypocapnia was the most frequent cause of posttraumatic alkalosis which also produces tissue hypoxia through its effects on the oxygen-hemoglobin dissociation curve and on vasomotor tone. The rise in blood lactate accompanying respiratory alkalosis sets the stage for severe metabolic acidosis should hypocapnia suddenly yield to hypoventilation or hypoperfusion. (Lyons, J. H., and Moore, F. D.: *Posttraumatic Alkalosis: Incidence and Pathophysiology of Alkalosis in Surgery, Surgery 60: 93 (July) 1966.*)

Respiration

MUCOLYTIC AGENTS A study was conducted to determine whether an ascorbic acid-percarbonate-copper sulphate mixture would be of value in treating chronic bronchitis. The drug known as Cumox was administered by inhalation to nine patients and the results compared to the effects of isotonic saline solution administered in the same fashion. The immediate physiologic effect of the drug mixture was not significantly different from the saline control, both being associated with comparable improvements in the 1-second vital capacity, maximum expiratory flow rate and maximum voluntary ventilation. However, the delayed effect extending over a period of several days showed further improvement in all three functions for the drug while the values following saline treatment stabilized or returned towards the base line. (Sabath, L. D., Sasahara, A. A., and Burleson, V. A.: *Evaluation of a New Mucolytic Agent, Dis. Chest 50: 47 (July) 1966.*)

EMPHYSEMA The lungs from 73 subjects with all degrees of emphysema from none to

severe were studied by inflated macrosections and postero-anterior and lateral chest films. Nearly all cases of moderate to severe disease were detected by experienced observers and about one-third of the mild largely asymptomatic cases. The most reliable criterion was manifestation of overinflation. (Nicklaus, T. H., and others: *The Accuracy of the Roentgenologic Diagnosis of Chronic Pulmonary Emphysema, Amer. Rev. Resp. Dis. 93: 889 (June) 1966.*)

PULMONARY SURFACTANT Chronic atelectasis experimentally produced by bronchial ligation did not reduce alveolar surfactant though different extraction techniques do give markedly different results. (Yeh, T. J., and others: *Alveolar Surfactant in Chronic Experimental Atelectasis, Amer. Rev. Resp. Dis. 93: 953 (June) 1966.*)

PULMONARY RESECTION In 64 tubercular patients long term (5 years) results of segmental and upper lobe resections were compared with selected pulmonary function tests obtained preoperatively and within six months after surgery. Patients with pneumonectomies or lower lobe resections were not included in this study. The following parameters were investigated: vital capacity (VC), total lung capacity (TLC), maximum voluntary ventilation (MVV) and residual volume (RV). All changes were expressed in percentages of preoperative values. VC fell by 15.9 per cent postoperatively; after five years the value was minus 11.2 per cent. TLC was minus 11.1 per cent; after five years, minus 4.7 per cent. MVV was minus 17.2 per cent and after five years, minus 8.1 per cent. RV decreased by 2.4 per cent in the early period, but showed an average rise of 19 per cent within five years. There was no correlation between age and rise of RV, but a distinct parallel to the extent of the resection could be noted. Younger patients showed the best rehabilitation of ventilatory function, breathing exercises being of considerable value. But even in older patients long term functional deficits were small in those with a normal postoperative course and not too extensive resections. The degree of the functional loss de-