

balance are helpful. Remember the patient's condition may be changed because of potent drugs he has been taking for hypertension or arthritis. Also, he may be unusually sensitive to certain drugs. (Zollinger, R. N.: *Preoperative Evaluation for Major Surgery, Postgrad. Med. 21: 609 (June) 1957.*)

**STOKES-ADAMS DISEASE** Sympathomimetic amines are effective in relieving Stokes-Adams attacks both by increasing ventricular rate in complete blocks and by abolishing a partial atrio-ventricular block. Quinidine and procaine amide are contraindicated. In presence of partial or complete atrio-ventricular block, quinidine and procaine amide produce ventricular extrasystoles, ventricular tachycardia, and ventricular fibrillation by depressing higher ventricular Purkinje centers allowing multifocal ventricular centers to dominate in ventricular depolarization. (Murray, F. G.: *Stokes-Adams Disease, New England J. Med. 256: 643 (April 4) 1957.*)

#### SHOULDER-HAND SYNDROME

Various forms of therapy were used in a series of 73 cases of shoulder-hand syndrome, with best results obtained by the use of ACTH or cortisone in conjunction with routine physiotherapy. Repeated stellate ganglion blocks with routine physiotherapy gave less satisfactory results than more intensive physiotherapy alone. (Rosen, P. S., and Graham, W.: *Shoulder-Hand Syndrome, Canad. M. A. J. 77: 86 (July 15) 1957.*)

**EPILEPSY** On the basis of effectiveness, toxicity, and cost, phenobarbital is chosen as the best drug to control major grand mal epilepsy, being given general preference over Dilantin. (Livingston, S.: *Drug Therapy for Childhood Epilepsy, J. Chronic Diseases 6: 46 (July) 1957.*)

#### CONTROLLED RESPIRATION

(*Ann. New York Acad. Sc. 66: 891 (April) 1957.*) The positive airway pressure gradient in natural breathing is identical to that induced by positive pressure applied at the mouth. The volume uptake at the same pressure gradient is identical.

Equal ventilation to perfusion ratios, whether achieved by natural or artificial ventilation, seem to result in equal uptake of oxygen and elimination of carbon dioxide. Artificial ventilation varies from the normal in its impairment of venous return, which in abnormal states may lead to a decreased cardiac output. When artificial ventilation is elected, quantitative measurements of pulmonary ventilation are essential. (Spencer, W. A.: *Factors of Significance in Respiratory System.*)

Controlled respiration applied to normal individuals by any reasonable method will be well tolerated. Under conditions of circulatory stress (deep anesthesia, spinal anesthesia or ganglionic blockade) controlled respiration may produce a profound depression of blood pressure and cardiac output. The anesthetist may combat this depression by vigorously supporting the patient's circulation or by use of pressure breathing with a low mean mask pressure. (Maloney, J. V., Jr., and Whittenberger, J. L.: *Direct Effects of Pressure Breathing on Pulmonary Circulation.*)

Controlled respiration is quite distinct from assisted respiration. A disintegration of normal respiratory control may be effected either by pharmacological or by mechanical means but it is accomplished most reasonably by the two acting in concert. The "educated" hand is not as learned as one might wish for purposes of adequate respiratory exchange. When control of respiration is established control of the over-all anesthetic state may be lost. (Little, D. M., Jr.: *Methodology of Controlled Respiration.*)

Lest the enthusiasm for controlled respiration be exaggerated, the general areas in which harm may come through controlled respiration are: the possibility of producing an effective anesthetic overdose; the production of depression of the circulation in patients who have circulatory or respiratory insufficiency; and the production of respiratory acidosis. In the patient with healthy lungs, controlled respiration is easy to apply and is well tolerated; but much more study is necessary to define its limitations and advantages for patients who are critically ill. (Papper, E. M.: *Evolution of Controlled Respiration in Anesthetic Practice.*)

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