

phylline improves the ventilatory status of the patient with emphysema, it causes deleterious effects on the cardiovascular system. (Christensen, R. C., and others: *Effects of Aminophylline on Coronary and Peripheral Circulation in Patients with Emphysema*, *J. Clin. Invest.* 37: 884 (June) 1958.)

WATER DIURESIS The role of anesthetic agents in diuresis inhibition was studied in 19 female patients. Diuresis was induced prior to preanesthetic medication by the rapid infusion of 5 per cent dextrose and water. Atropine was given without effect on the diuresis. Induction with ether, nitrous oxide or cyclopropane regularly caused abrupt and long lasting inhibition of the established diuresis. Induction with thiopental was without effect. Patients anesthetized with the latter agent continued diuresis during the addition of any one of the three inhalational agents. Water diuresis during thiopental anesthesia could be inhibited by intravenous vasopressin and subsided spontaneously when water loading was terminated. These data suggest the possible use of thiopental to avoid susceptibility to water intoxication in the surgical patient during and after operation. (Aprahamian, A. H., and others: *Effect of Anesthetic Agents on Water Diuresis*, *J. Clin. Invest.* 37: 875 (June) 1958.)

BARBITURATES A comparative study of the rate of penetration into the brain of thiopental, pentobarbital, barbital, and phenobarbital was made in dogs. Thiopental passed more readily into the brain than did the other three barbiturates. This was correlated with the onset of hypnotic effect and also with the difference in relative lipid solubilities between the barbiturates. (Mark, L. C., and others: *Passage of Thiobarbiturates and Their Oxygen Analogs into Brain*, *J. Pharmacol. & Exper. Therap.* 123: 70 (May) 1958.)

PENTOBARBITAL ANESTHESIA The effect of acetylsalicylic acid, aminopyrine, morphine, phenylbutazane and prednisone on duration of hypnosis and brain barbiturate concentrations in pentobarbital anesthesia in mice has been determined. Only aminopyrine and phenyl-

butazane significantly increased the brain barbiturate concentration and prolonged pentobarbital hypnosis. (Eckhardt, E. T., Greis, M. E., and Tabachnick, I. I. A.: *Effect of Some Analgesic and Anti-inflammatory Agents on Sodium Pentobarbital Anesthesia*, *Proc. Soc. Exp. Biol. and Med.* 98: 423 (June) 1958.)

HYPOTHERMIA The use of hypothermia induced by a continuous flow of cold water through an intragastric balloon is described in two patients undergoing neurosurgical procedures. In one patient, the body temperature was lowered to 31.5 C. in 90 minutes. The method proved simple, easy to manage, and very effective. Rewarming can be begun more promptly than with any other method. (Khalil, H. H.: *Hypothermia By Internal Cooling in Man*, *Lancet* 1: 1092 (May 24) 1958.)

HYPOTHERMIA Dogs cooled as long as four hours (23-24 C.) and then rewarmed showed a prompt return of hematocrit to precooling control levels. After 8-12 hours of cooling the hematocrit and blood and plasma specific gravity continued to fall below normal levels. Prolonged blood clotting time occurred during hypothermia of 2-4 hours, and promptly returned to normal clotting time upon re-warming. However, the blood clotting time is considerably prolonged after 8-12 hours of cooling. No significant changes occurred in the prothrombin time. Rewarming after hypothermia of 2-12 hours did not result in any significant changes in electrolytes, acid-base balance, blood sugar and amino acids or lactate/pyruvate ratio. It is concluded that six hours of hypothermia and subsequent re-warming is not clinically hazardous for the danger of ventricular fibrillation. (Fisher, B., Fedor, E. J., and Lee, S. H.: *Rewarming Following Hypothermia of Two to Twelve Hours*, *Ann. Surg.* 148: 32 (July) 1958.)

HYPOTHERMIA IN ASPHYXIA A study of the effects of deep hypothermia on the cardiac activity of a premature human fetus showed: (1) The full-term human infant can tolerate lower temperatures than the adult, and the premature infant is even more resistant to cold. (2) Carbon dioxide has several physiological effects