

of Thermal Responses to Pentylentetrazol, *J. Pharmacol. & Exper. Therap.* 126: 143 (June 1959.)

ANALEPTICS The effect of Megimide and Metrazol were studied in mice, rabbits and dogs. Megimide proved to be a convulsive agent similar to Metrazol. It also acted as an antagonist to the depressant action of pentobarbital, urethane and ethyl alcohol. Subconvulsant doses in dogs and mice would lead to convulsions if the animals had previously received large doses of morphine. Megimide is not a specific barbiturate antagonist, since it will antagonize depression produced by drugs of unrelated chemical structures. No data were obtained to indicate that Megimide was a better antagonist than metrazol, in acute barbiturate poisoning. (Zapata-Ortiz, V., De-LaMata, C. R., and Campos-Iturrizaga, A.: Effect of Bemegride (Megimide) and Metrazol on Some Neurodepressors, *J. Pharmacol. & Exper. Therap.* 125: 347 (April) 1959.)

BARBITURATE ANTAGONIST Treburon, primarily an anticoagulant drug, has been noted to have analeptic actions in dogs anesthetized with pentobarbital. This activity was investigated in dogs, rabbits and pigeons. A reduction of time for return of righting reflexes in animals anesthetized with barbiturates and given Treburon was statistically significant. No toxic effects were noted. (Joseph, A. D., Jindal, M. N., and Patel, M. A.: Treburon as Barbiturate Antagonist, *Lancet* 1: 815 (April 18) 1959.)

INTRA-ARTERIAL THIOPENTAL The effects of thiopental injected intra-arterially have been studied on spiral strips of rabbit aorta, after intra-vascular injections into the ears of rabbits, and the profused hind leg of dogs. Thiopental causes a contraction of the isolated strips, a constriction of the profused vessels of the rabbit ear. This constriction is due to release of nor-epinephrine from structures in or near the artery wall. The constriction was not due to the alkaline pH of the

solution injected. Hexobarbital which has not caused vascular thrombosis has almost no constrictor action in the rabbit ear. The attempts to observe a similar constrictor action of thiopental in the profused dog's hind leg were unsuccessful. (Burn, J. H., and Hobbs, R.: Mechanism of Arterial Spasm Following Intra-Arterial Injection of Thiopentone, *Lancet* 1112 (May 30) 1959.)

PHENOBARBITAL EXCRETION The acid-base equilibrium of the blood of chloroanesthetized dogs was altered by experimentally induced hyper- and hypoventilation or by the intravenous injection of hydrochloric acid N/4 solution or sodium bicarbonate solution 3 per cent. Phenobarbital was determined with a spectrophotometric method. In a group of 11 nephrectomized dogs, respiratory or metabolic alkalosis increased the level of phenobarbital in the blood. In a group of 47 dogs the renal excretion of phenobarbital was found to occur by a filtration-reabsorption process and to increase with alkalosis. The pK of phenobarbital is 7.26; changes in pH of the plasma will therefore exert an influence upon the ionization of phenobarbital and concomitantly affect its excretion through the kidney. (Mollaret, P., and others: Acid-Base Balance and Renal Excretion of Phenobarbital, *Compt. rend. Acad. Sc.* 248: 2257 (April) 1959.)

BARBITURATE INTOXICATION Based upon experimental data in dogs that alkalosis increased the excretion of phenobarbital by the kidneys by inhibiting tubular reabsorption, 50 cases of barbiturate intoxication were treated with injections of 3 per cent solutions of sodium bicarbonate (up to 5-6 liters per 24 hours). Artificial ventilation was maintained in the cases with marked respiratory depression. The authors report very favorable results in their series and no deaths. (Mollaret, P., and others: Treatment of Barbiturate Intoxication, *Compt. rend. Acad. Sc.* 248: 2424 (April) 1959.) (Abstractor's Comment: No blood levels of barbiturate, pH or carbon dioxide substantiate these data.)