

Literature Briefs

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Briefs were submitted by Drs. C. M. Balinger, N. Bergman, P. P. Bosomworth, D. L. Bruce, R. B. Clark, D. Duncaif, M. Helrich, J. Jacoby, R. L. Klein, W. H. Mannheim, R. C. Morton, A. D. Randall, L. J. Saidman, P. Sechzer, A. D. Sessler, E. A. Talmage, C. J. Wilkinson. Briefs appearing elsewhere in this issue are part of this column.

Circulation

ARRHYTHMIAS Diphenylhydantoin sodium (DPH) has long been prescribed as a drug for the control of epileptic seizures. Recently, there has been renewed clinical interest in the use of DPH for the therapy of cardiac arrhythmias. Fifty-four patients received intravenous diphenylhydantoin on 57 occasions for abnormal cardiac rhythm. Nineteen of 23 who had digitalis-induced arrhythmias responded with abolition or marked suppression of a ventricular ectopic focus. Some experienced conversion of supraventricular arrhythmias to a regular sinus mechanism. Of 28 patients whose arrhythmias were unrelated to digitalis, 7 responded favorably. The 3 remaining patients had a poor history with regard to the utilization of digitalis and were therefore not evaluated. The initial dosage administered intravenously did not exceed 250 mg. infused over a period of 3 to 5 minutes. There was a reasonably rapid onset of action and relative paucity of side-effects. One death was reported in a 67 year old man who became hypotensive and apneic after the injection. DPH is therefore recommended in the treatment of digitalis-induced arrhythmias. It may also be useful in the treatment of arrhythmias not associated with digitalis intoxication. (Karlner, J. S.: *Intravenous Diphenylhydantoin Sodium (Dilantin) in Cardiac Arrhythmias, Dis. Chest* 51: 256 (March) 1967.)

HEART FAILURE Isotope dilution studies have shown a highly significant relationship between total body water (TBW) and total exchangeable cation (sodium plus potassium). TBW, exchangeable sodium and potassium, were measured in patients having congestive heart disease. The patients were divided into two groups: Group A had edema and normonatremia while Group B were edematous and hyponatremic. Group A patients demonstrated a marked increase of total exchangeable sodium, a moderate increase of total exchangeable cation and of TBW, and a tendency toward reduction of total exchangeable potassium. Group B showed the same tendencies as Group A except that serum sodium and cation concentrations were significantly lower. All hyponatremic patients demonstrated an absolute excess of sodium. This finding along with the increase in TBW demonstrates that the hyponatremia in cardiac edema is largely dilutional. (Olesen, K. H.: *Interrelations Between Total Exchangeable Sodium, Potassium, Body Water, and Serum Sodium and Potassium Concentrations in Hyponatremic and Normonatremic Heart Disease, Circulation* 35: 895 (May) 1967.)

COR PUMONALE Treatment of cor pulmonale resulting from pulmonary hypertension should involve three drug actions: bronchodilation, pulmonary vasodilation and cardiac stimulation. Only two drugs presently available, isoproterenol and aminophylline, possess these actions and each of these has definite drawbacks. Investigation of new compounds has been extended to the quinazoline, MJ 1988. This compound is of special interest because it is well absorbed in the gastrointestinal tract and the cardiac stimulant and bronchodilator properties are not influenced by