ABSTRACTS

Editorial Comment: A fixed style of presentation for this department of Anesthesiology has purposely not been defined. It is the wish of the Editorial Board to provide our readers with the type of abstract they desire. Correspondence is invited offering suggestions in regard to the length of abstracts, character of them, and source of them. The Board will appreciate the cooperation of the membership of the Society in submitting abstracts of outstanding articles to be considered for publication.


“A clearer understanding of some aspects of spinal anesthesia would be aided by knowledge of the fate of procaine injected intrathecally and the relationship of clinical effect to concentration of agent in spinal fluid. . . . It is the purpose of this communication to report experiments designed to describe the disposition of intrathecally administered procaine and to indicate the spinal fluid level of the drug necessary for sensory anesthesia. The subjects, all adult males, were in good physical condition other than the presence of mild or moderately advanced peripheral vascular disease. At the time of study, all were in the post-absorptive state and had received no medication. . . . Samples of cerebrospinal fluid were taken at various times following the administration of procaine at the fourth lumbar interspace. . . . The decline of procaine concentration which limits the duration of spinal anesthesia is not due to chemical breakdown of the drug in the spinal fluid, but to absorption into the systemic circulation where it is metabolized to p-aminobenzoic acid and diethylaminoethanol. The concentrations of procaine at various levels of the subarachnoid space decline at the same rate. There is a critical concentration of procaine, about 0.2 mgm. per ml., which is necessary for sensory anesthesia.”


“It is well established that disturbances in cardiac rhythm commonly occur in the anesthetized individual regardless of the anesthetic agent administered. . . . It has been shown that chloroform, cyclopropane, ethyl chloride and trichlorethylene sensitize the heart to stimulation of various kinds so that ventricular tachycardia and fibrillation may result. . . . When vasopressor drugs are to be used, laboratory and clinical evidence indicate that ’neosynephrine,’ and to a less extent ephedrine, are safer than epinephrine during general anesthesia. Also, there is evidence that chloroform, cyclopropane, and possibly ethyl chloride can suppress the automatic activity of the heart to the point of cardiac arrest. . . . Sinus arrhythmia and displaced pacemaker are commonly observed during diethyl ether anesthesia; however, it is generally believed that neither diethyl ether nor divinyl ether seriously affect cardiac automaticity or sensitize the myocardium to epinephrine. Although it is relatively infrequent for diethyl or divinyl ether to stimulate the ventricular centers, ventricular tachycardia and ventricular fibrillation may occur with ether anesthesia. Where large doses of epinephrine have been used to control bleeding during ether anesthesia, cardiac fatalities have been reported. With adequate oxygenation, nitrous oxide and ethylene are relatively innocuous. Occasional arrhythmias do

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