pressant type, and (2) the stimulating or convulsive type. . . . It is unwise to attempt any extensive type of regional anesthesia in circumstances in which one does not have immediate access to an ultra short-acting barbiturate, a vasopressor, and equipment for their intravenous administration and some effective method of giving artificial respiration. . . . In all situations in which surgery is elective it is advisable to withhold food. . . . All efforts should be made to operate under circumstances that will allow the use of premedication. Many a successful block is not satisfactory because the patient is apprehensive. . . . As a rule, most minor surgical procedures may be performed by infiltration of the operative site with the chosen local anesthetic drug. . . . Regional anesthesia by direct nerve blocking is selected when the operative site is in an area supplied by one or two nerves which are easily accessible.''

A. A.


"One of the factors in the widespread acceptance of procaine as a local anesthetic is the presence in living tissues of an enzyme by which the drug is rapidly hydrolyzed to relatively non-toxic products. . . . Because of its relation to therapeutic problems this enzyme in the past has been the object of considerable interest, which has recently been increased by the intra-venous administration of procaine as an analgesic. . . . The discoveries that procainesterase (like serum cholinesterase = pseudocholinesterase) is present in human serum, . . . that its activity is inhibited by the same agents as serum cholinesterase, . . . that the levels of both enzymes rise in toxic goiter, . . . and fall in liver diseases . . . have led to the suspicion that procainesterase and serum cholinesterase may be identical . . . but no conclusive evidence has been given so far. Furthermore, the literature does not indicate whether other local anesthetic esters are attacked by the same esterase, or whether the rapid hydrolysis of procaine is exceptional. Ultraviolet spectrophotometry has been found to afford an accurate, rapid and convenient means for obtaining this previously unavailable information. . . .

"Evidence for the identity of 'procainesterase' and cholinesterase of human serum was presented. Acetylcholine (or benzoylcholine) and procaine (or other local anesthetic esters) can act as competitive inhibitors for the same enzyme. Although the hydrolysis of acetylcholine is about 400 times faster than that of procaine, the affinity of procaine for this esterase is about 220 times greater. . . . Six local anesthetics other than procaine were investigated. Pipercaine was hydrolyzed faster, all other esters more slowly than procaine. The affinities between esterase and all local anesthetics were high, in the case of tetra-caine about the same as physostigmine."

A. A.