"The greatest use of pentothal was
for superficial and extremity wounds.
... More than half of the extremity
wounds were operated upon with ether
anesthesia. One thoracic operation, a
closure of a sucking chest wound, was
performed under pentothal anesthesia.
All other abdominal and thoracic op-
erations were performed under ether
anesthesia preceded by N\textsubscript{2}O, ethyl
chloride or pentothal for induction.
Ethyl chloride was used most com-
monly for induction into ether anes-
thetia. It was quite satisfactory for
this purpose. ... The complications
which were seen appeared to be related
to the patient's serious condition and
to the management during anesthesia
and operation rather than to the use
of any particular anesthetic agent.
Good anesthesia in these patients de-
PENDS largely on the application of
fundamental principles learned in
more ordinary conditions."

A. A.

ADRIANI, JOHN: Local and Regional
Anesthesia for Minor Surgery. S.
Clin. North America, 1507-1529
(Oct.) 1951.

"Local and regional anesthesia are
desirable for minor surgical procedures
because they obviate the risks and dis-
comforts of inhalation anesthesia and
allow such surgery to be performed
in the office or out-patient department.
... Commercially prepared, ready
mixed and sterilized solutions are
available in multiple dose vials. Such
preparations are preferred from the
standpoint of safety, stability, asepsis
and ease of handling to those made up
from tablets and powders. Accidents
due to improper dilution of or use
of concentrated solutions and the possi-
bility of contamination are averted.
... Although elaborate needles, syr-
gees, stopcocks and gadgets of various
sorts are available they are not neces-
sary. Successful regional anesthesia
can be induced with simple equipment.
Elaborate equipment does not supplant
technical knowledge and skill. Sharp
needles and leakproof syringes which
are not awkward to hold will suffice,
... Although numerous compounds
possessing pressor and vasoconstrictor
properties are available, the most satis-
factory substance suitable for local an-
esthesia is epinephrine. ...

"Local and regional anesthesia is
not entirely without hazards. When
any sizable quantity of a local anes-
thetic drug inadvertently gains access
into the blood stream the individual
responds with a train of symptoms to
which the clinician refers as a 'reac-
tion.' Two types of toxic reactions are
recognized: (1) the circulatory or de-
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 intravenous 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. Piperocaine 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.