without drainage. In the face of definite infection the stump was either
drained or left wide open.

"Post-operatively the stump is gradually degerated with the use of ice
bags. This time of defrigeration depends upon the blood supply and the
degree of infection present. In the presence of good blood supply the ice
bags can be removed in twenty-four hours. Infection increases the time of
post-operative degeration.

"Discussion: With the method outlined it is possible to secure complete
surgical anesthesia for about one hour. Primary union of the stump occurs.
There is no apparent change either in the pulse rate or blood pressure or of
the respiration during refrigeration, during the operative procedure, or
post-operatively. Immediately after application of the tourniquet the pa-
tient may feel slight pain, but this disappears within ten to fifteen minutes
after immersion in the ice. The general diabetic status of the patient is
not made worse. It is possible to amputate through definitely infected
areas.

"Refrigeration offers a choice of
anesthesia in the aged and difficult-risk patient which is a great advan-
tage. These cases do not show shock when allowed to return to the ward,
and they are usually hungry and are fed soon after the operation. Pain is
relieved by keeping the ice bags about the stump with a small but sufficient
bandage over the incision. . . . We have seen cases where there were lymphatic
streaks above the knee which healed per primun, so that the appli-
cation of cold must have some inhibitory effect upon the growth of the bac-
teria in the tissues.

"In amputations below the knee it has been possible, with the aid of re-
frigation, to be more conservative than has previously been the case."

A. W. F.

ANSHRO, F. P., AND PICO, L. J.: Con-
tinuous Spinal Anesthesia: Report of
One Hundred Cases in Which This
Method was Employed. Am. J. Sur-
g. n.s. 55: 504-508 (Mar.) 1942.

"In 1940, Dr. W. T. Lenmon, of
Philadelphia, published his first work
on spinal anesthesia by the continuous
method. . . . Classification of opera-
tions [in our series included] radical
breast (1), . . . gastrointestinal (40),
. . . biliary tract (15), . . . hernias
(20), . . . gynecologic (15), . . . am-
putations (5), . . . orthopedic (5),
. . . [and] genitourinary (4). . . . All
the operations were begun and com-
pleted under continuous spinal anes-
thesia. . . . The drop in blood pressure
under continuous spinal anesthesia was
notably less than in other methods of
spinal anesthesia. . . . Our practice has
been to give 7/4 gr. of ephedrine before
anesthesia if the systolic blood pres-
sure is below 150 mm. of mercury. If
above 150 mm. of mercury, we give the
spinal injection first and the ephedrine
a few minutes later. In only 3 per
cent of our cases was it necessary to
give additional ephedrine. The aver-
age variation of blood pressure was be-
tween 25 to 50 mm. of mercury. . . . If
alarming toxic symptoms develop from
injection of the novocain solution, one
can with the fractional technic with-
draw the cerebrospinal fluid (about 3
to 6 cc.) and it has been noted that the
nerves recover promptly from the anes-
thesia. . . . In our series headache was
an incident in only 2 per cent. . . . In
our series of cases, the incidence of
urinary retention was 4 per cent.
There were three instances of pul-
monary atelectasis making an incidence
of 3 per cent. There were no transient
palsies or permanent paralysis. There
was no vertebral arthritis. . . . The
advantages [of this method] are: (2)
fractional injections; (b) controlla-
bility; (c) decreased toxicity; and (d)
regulated duration of analgesia." 15
references.

J. C. M. C.