low the diaphragm... Pure novoca
cain crystals in sterile ampules were
used in all cases, the drug being dis-
solved in the cerebrospinal fluid. The
height of anesthesia was controlled in
part by the site of the puncture, the
amount of the anesthetic, the amount of
fluid used as a solvent, and by barba-
tage. The anesthetic was usually
given in the upright position, but the
lateral position was used very fre-
quently and whenever indicated. The
patient was always placed on his back
immediately and the head lowered
slightly. ... An average amount of
about 100 mg. was by far the most fre-
quently used. ... For various rea-
sons supplementary anesthetics were
used singly or in combination on 94
(9.8 per cent) of the patients, for a
total of 110 times. ...

"The correlation of the blood pres-
sure findings with the amount of drug
used always has been a rather difficult
procedure. In this series it was car-
rried out somewhat approximately in
289 cases. It was found, as would be
expected, that the smaller the dosage
the greater the percentage of cases
coming in the group of small degree of
fall. ... The effect of stimulants was
noted in 329 of these cases. ... For
most of this time ephedrine and caffeine
were the chief drugs given, usually
singly, but often in combination. ...
Oxygen ... should be employed not
only in cases of extremis but almost
routinely where there is a marked fall
in blood pressure accompanied by ner-
vousness, nausea, and vomiting. ...
The study of postoperative complica-
tions associated with spinal anesthesia
reveals most of those found in associa-
tion with the use of any other type of
anesthesia. ... The total number of
postoperative complications was 73, or
7.6 per cent. By far the greatest num-
ber of these were respiratory tract
complications, constituting 19 in all.
Eight of these were pneumonia, eight
lung emboli, and three mild infections.
... The next most frequent com-
pliation, which was somewhat unusual,
was the appearance of hiccough. This
occurred most often in the elderly pa-
tients having transurethral resections.
... The other complications in order
of their frequency were toxemia or
uremia, cardiac decompensation, head-
ache, peritonitis, psychosis, phlebitis,
shock, ileus or obstruction, and cerebral
embolus. The number of psychoses ap-
ppears rather high for such a small
group; but here again the high incidence
of elderly prostatic patients accounts
for the unusual number, the complica-
tion occurring three times in such pa-
tients and all being temporary psy-
choses which cleared up before the
patient left the hospital. The fourth
case was a true manic depressive psy-
chosis. ... Thirty-four of these post-
operative complications were of such
severity that they resulted in post-
operative deaths. ... Two fatalities
occurred on the operating table and
therefore might very properly be
termed anesthetic deaths. ... One
patient who died from postoperative
shock within forty-eight hours may
also probably be considered as one in
whom the anesthetic was a definite
factor in the outcome."

J. C. M. C.

HUTTON, J. H.: Spinal Anesthetic
Agents and Methods Usually Em-
ployed at the University of Oregon
Medical School Hospitals. West J.
Surg. 52: 218–221 (May) 1944.

"In reviewing our spinal anesthesia
cases for the past five years, I have
found that novocaín alone was em-
ployed 670 times. Of these, 45 cases
required supplemental gas anesthesia.
The pontocaine-novocaín combination
was employed in 2,415 anesthesies and
in 575 of these the spinal anesthetic
was intentionally combined with in-
halation agents. There were no deaths
on the operating table in this series of cases, and there were no subsequent deaths that I attributed to the choice of anesthetic methods or agents. Entire intercostal paralysis did not occur except for transient apneas which were only rarely encountered during the induction of supplemental cyclopropane anesthesia. . . . I believe that the intentional combination of spinal anesthesia with inhalation anesthesia has special merit in upper abdominal operations. Nausea and retching frequently occur in the conscious patient when spinal anesthesia is used alone. This is very troublesome to the surgeon and its control may require the use of inhalation anesthesia. The conscious patient is quite likely to complain of pulling sensations and discomforts which may be of reflex origin during manipulation in the upper abdomen. Spinal anesthetic doses sufficient to obviate these complaints may be toxic and depressive. An unconscious patient, quiet breathing, relaxation that may be considerably prolonged beyond the expected effective time of spinal anesthesia with minimal amounts of inhalation anesthetics are, I believe, advantages which greatly facilitate upper abdominal surgical procedures." 2 references.

J. C. M. C.


"Fractional or continuous spinal anesthesia is becoming more widely used in military surgery. . . . Except for the malleable needle the other items can be readily improvised. . . . The series of 25 cases . . . includes recurrent herniae, open reduction of the lower limbs, nephrolithotomy and appendectomies. . . . Procaine crystals were used. . . . It occasionally happens that spinal fluid cannot be aspirated after the patient has been turned on his back. Turning the needle 90 degrees often corrects the difficulty. If aspiration cannot be done, an injection can still be made, for the needle is very likely still within the spinal canal. Subarachnoid fibers within the spinal canal may cover the bevel of the needle."

J. C. M. C.


"Intravenous anesthesia has now been proved to be as valuable as any other known anesthetic agent, including ether. In war surgery intravenous anesthesia, in its general usefulness, leads all others. The technique of administering intravenous anesthesia should be kept as simple as possible." 19 references.

J. C. M. C.


"The belief that pentothal sodium in major surgery should be relegated to the status of a basal anesthetic or supplementary adjunct to another type of anesthesia is not well founded. . . . Pentothal sodium anesthesia is neither basal nor supplementary. . . . Pentothal sodium is adequate for major surgery in any case in which intravenous approach is feasible. Adequate preoperative medication will markedly improve the course of anesthesia. If the dosage is adjusted to the individual needs of the patient by fractional administration, pentothal sodium oxygen anesthesia has a wide margin of safety and can be used in many cases when other types of anesthesia are definitely contraindicated. The simplicity of the