of novocaine and the extraction of the child varied from nine to thirty minutes. The average amount of pentothal used was 12.4 grains.

Atropine sulfate, gr. $\frac{1}{50}$, was the only premedication in 17 cases. Demerol plus scopolamine was given in the majority of the remaining cases. Nitrous oxide analgesia in small amounts with continuous oxygen was used during the operation with all the patients.

A mild laryngospasm occurred in 1 patient. There was no fetal or maternal mortality. In 2 cases there was delayed fetal respiration. No references.

C. A. II.


At Grace-New Haven Community Hospital from 1942 to 1946 there were 492 cesarean sections performed using pentothal as the sole agent until after delivery. Supplementation of equal parts of nitrous oxide and oxygen after the delivery was used.

A 2.5 per cent solution is used. Induction is quick, quiet and pleasant. Surgery may be started in one to one and a half minutes after the induction of anesthesia.

Pentothal passes through the placenta, reaching equal concentration in fetal and maternal blood with ten to twelve minutes. There is a period of five to eight minutes before the drug reaches the fetus in high concentration. In the author's cases the time from the start of anesthesia to delivery of the baby is 8.83 minutes. The average time of reaction of the mother is 28.7 minutes. There were no maternal deaths and 2.7 per cent of the cases had mild atelectasis. There were 3 per cent fetal deaths. Seventy per cent of the infants cried spontaneously. Thirty per cent were resuscitated by means of suction plus oxygen under pressure.

In cases where over 500 mg. of pentothal was used for delivery of the baby, the operation was completed under cyclopropane and oxygen. 2 references.

C. A. H.


The factors which control the permeability of the barrier between the blood and cerebrospinal fluid have not yet been elucidated. It is generally recognized that the barrier to certain drugs or dyes may be lowered during high fever, in acute inflammation of the meninges, and after traumatic injury to the central nervous system.

The recent studies of Wallace and Brodie on the passage of bromide and iodide ions into the cerebrospinal fluid, indicate that the extracellular fluid of the central nervous system is of greater importance as a source of cerebrospinal fluid than previously recognized. Attention should be directed towards the meningeal and intracerebral blood vessels, as well as the choroidal vessels, in considering factors concerned with the production of cerebrospinal fluid and the passage of substances from the blood into the cerebrospinal fluid.

Accordingly, the experiments reported were undertaken in order to determine whether ether anesthesia, which produces cerebral vasodilatation and increases brain blood flow, is accompanied by an increase in the penetration of a foreign substance into the cerebrospinal fluid. These findings were compared with dial-urethane anesthesia.

The passage of sulfathiazole from the blood to the cerebrospinal fluid
was compared in dogs under ether and
dial-urethane anesthesia after intra-
duodenal and after intraperitoneal ad-
ministration of sulfathiazole. Unanesthetized dogs were also studied after
intraperitoneal injection. The trans-
fer of sulfathiazole was indicated by
the C/B ratios obtained by dividing the
cerebrospinal level by the blood
level at the third hour after the ad-
ministration of the drug.

It was found that there was an in-
creased passage of sulfathiazole into
the cerebrospinal fluid in ether anes-
thesia. After intraduodenal injection,
the C/B ratios were 29 per cent higher
with ether anesthesia than with dial-
urethane. After intraperitoneal injec-
tion the C/B ratios under ether were
80 per cent higher than in the unan-
esthetized animals and under dial-ure-
thane 20 per cent higher. It was also
noted that there existed higher sul-
fatiazole blood levels under ether
anesthesia.

These findings were discussed from
the standpoint of the influences of
changes in cerebral circulation. It
was felt that variations in the passage
of any given substance from the blood
into the cerebrospinal fluid are regu-
lated by the total brain blood flow and
by the state of the cerebral capillaries.
16 references.

R. J. G.

Beck, M. C., and Ball, R. C.: Spinal
Anesthesia in Obstetrics. South. M.
J. 41: 467–473 (May) 1948.

The use of spinal anesthesia in ob-
stetrics has been increasing through re-
cent refinements in technic and the use
of longer acting agents resulting from
the work of Sise, Roman-Vaga and
Adriani, Cullen and associates, Potter
and Whitaere, Parmley and Adriani,
and Tovell et al. The authors briefly
discuss the above author’s reports.

Stimulated by their reports, Beck
and Ball report 966 cases in which
spinal anesthesia was used for delivery.
Eight hundred and twenty-three pa-
tients received low spinal anesthesia
for vaginal delivery, while 143 received
spinal for cesarean section.

Originally they used the technic of
Parmley and Adriani, but later de-
veloped their own method for “saddle
block” anesthesia. With the patient
in the sitting position, a skin wheal is
made with 0.5 cc. of 1 per cent procaine
containing 5 per cent ephedrine sul-
fate. The tap is made in the second,
third or fourth lumbar interspace, and
at the completion of a uterine contrac-
tion a mixture containing 1 cc. of
1:200 nupercaine solution (5 mg.), 1
cec. of 10 per cent dextrose, and 0.5 ce.
of 1:1000 epinephrine hydrochloride is
injected at the rate of 1 cc. per second.
After holding the patient in this posi-
tion for ninety seconds, they place her
in the supine position with her head
elevated on a doubled pillow. There
results anesthesia of the anus, peri-
neum, and skin of the abdominal wall
2 or 3 inches above the symphysis
pubis. Uterine contraction pain is re-
lieved in three to five minutes. The
feet and legs feel heavy but can usually
be moved slightly. If uterine contrac-
tions are still painful after five min-
utes, the anesthetic agent can be forced
up the spinal canal by flexing the legs
on the abdomen for the duration of
one or two pains. There is a slight
elevation of pulse and a fall in blood
pressure of 10 to 20 mm. These return
to normal within ten to fifteen minutes.

The injection may be repeated if
painful contractions occur; however, if
termination of labor is near, light gas
anesthesia may be administered for
delivery. Cervical and perineal anes-
thesias usually last long enough to per-
mit repair without supplement.

Usually the tap is performed in
primigravidas when the patient is well
in labor with 5 to 8 cm. cervical dilata-
tion, 50 to 70 per cent effacement, and