Abnormal fasting state, having received a hypodermic injection of 1/150 grain of atropine sulfate one hour before. Two consecutive determinations of the metabolic rate are then taken in the usual way. A trained anesthetist sprays the throat with 10 per cent cocaine and induces anesthesia by the intravenous injection of pentothal, administering the least amount of drug necessary to produce complete relaxation. If the breathing is free and easy, the regular metabolism rubber mouthpiece is inserted. If the breathing is not free, a mental airway attached to the rubber mouthpiece is inserted to facilitate adequate air exchange. Adhesive tape is then tightly applied around the lips to prevent any possible air leak. Two consecutive metabolic tests are then taken. During the test the chin is supported to facilitate normal breathing and a small amount of additional pentothal is injected when necessary to produce uniform relaxation.

"A total of 45 patients were studied by this plan. . . . Eighteen patients who had normal basal metabolic rates and no evidence of metabolic disease were used as control subjects. . . . In normal patients the metabolic rate dropped an average of 13 per cent under pentothal anesthesia and an average of 1 Gm. of pentothal was necessary to induce anesthesia. Patients with hyperthyroidism showed little drop in the metabolic rate under anesthesia and 2 Gm. or more of pentothal was required to produce sleep. Patients with greatly elevated metabolic rates due to various nervous states had a drop in the basal metabolic rate to normal under anesthesia, indicating an absence of hyperthyroidism. This method of metabolism testing induces a perfect basal state—the resulting rate being void of all nervous and muscular factors. In the occasional problem patient with an elevated metabolic rate this procedure may be used to good advantage. . . .

"The test has been used to advantage in determining the safest time for operation on patients with hyperthyroidism who have associated nervous states and in whom satisfactory metabolism tests are difficult to obtain. Hypertensive patients with elevated rates had a lowering of the metabolic rate under anesthesia, showing that the occasional increased rate of the hypertensive patient is related to a tension state and not to the hypertension."

A. A.


"Prolapsed hemorrhoids are usually excruciatingly painful, yet unless strangulation ensues most surgeons prefer not to operate until the marked edema has subsided. During this period of waiting, which may last several weeks, the discomfort is often extreme. . . . To relieve the sufferings of these unhappy persons, a 1:1000 solution of procaine hydrochloride was injected intravenously. . . . All the patients studied were men admitted for the treatment of severe pain in the anal region. . . . After a preliminary period of observation, some of the patients received a 1:1000 solution of procaine hydrochloride intravenously in a volume containing 4 mg. per kilogram of body weight. The predetermined dose was injected in exactly twenty minutes. Another group received 1 Gm. of procaine hydrochloride in a liter of isotonic sodium chloride solution injected intravenously over a three to four hour period. The first method is suitable for the home and office and the second for the hospital. No barbiturates or narcotics were administered. To aid in reducing the anal edema, the patients were requested to stay in bed but were allowed bathroom privileges.
During the period of this study only one intravenous injection of the procaine solution was given daily. The daily injections were continued until pain was markedly relieved. Usually no treatment was required after the third day.

"The results of treatment are as follows: A definite reduction of the 'sharp' pain occurred within three minutes after the first intravenous injection was started. The dull localized pain subsided shortly thereafter. Complete comfort persisted for five to ten hours after the twenty minutes method and for seven to twelve hours after the longer procedure. Partial relief for the remainder of the day followed with both methods. Some rectal discomfort was present the next morning, but on repetition of the treatment it abated in a similar manner. If pain then recurred, it did so with diminished fury. The procaine hydrochloride was usually needed through the third day; thereafter, many patients were comfortable and required no further medication. It was noted that ulceration, if present, frequently healed by the fifth day."


"Among the many recent advances in anesthesiology, the development of synthetic analgesics holds a prominent place. . . . One of the outstanding recent advances in anesthesiology has been the application of curare to aid muscular relaxation. . . . The use of intravenous procaine constitutes another important advance. . . . Continuous caudal anesthesia for obstetrics was introduced by Hingson in 1942. . . . In 1939 Lemmon introduced continuous spinal anesthesia. . . . In 1947 Saklad and his co-workers reported a method of intraspinal segmental anesthesia. . . . Paravertebral lumbar sympathetic nerve block for the treatment of acute thrombophlebitis in the lower extremity is a well established procedure. . . . Smith and Rees have recently reported gratifying results with prolonged continuous spinal anesthesia in three patients with peripheral arterial embolism. . . . Stellate ganglion block by providing vasodilatation of the intracranial arteries has proved effective for the treatment of intracranial hemorrhage, embolism, thrombosis, and arterial spasm. . . . Intercostal nerve block following upper abdominal surgery has been advocated to reduce postoperative discomfort and pulmonary complications. . . . Various vasopressor drugs have been added to spinal anesthetic solutions in order to prolong the effects and to reduce the amount of the anesthetic agent. Many conflicting reports have appeared in the literature on the results obtained with combinations of ephedrine, epinephrine, or neosynephrine with procaine, pontocaine, or nupercaine."


"The postspinal headache is a serious objection to the use of spinal analgesia in obstetrics. Before we devoted extra attention to avoiding it, our obstetricians were reluctant to have their patients receive spinal analgesia. . . . The incidence of this complication in several reports of spinal anesthesia for vaginal delivery has varied from 20 per cent to zero. . . . We began this study in February, 1947. Out of many diverse and conflicting statements in more than one hundred articles, we formulated the following as a working