Bronchial aspirations and atelectasis probably developed during transfer due to the impossibility of proper nursing care. The anoxic emergency took precedent over anything else and tracheo-bronchial toilet was performed as soon as possible. Postural coughing and breathing exercises were performed twice a day on patients whose general condition was good and whose surgical condition permitted. Postural drainage was resumed postoperatively for as long as any retained secretions were detectable in the chest. A vigorous course of treatment was arranged by the physiotherapists. The results justified the severity of the technique and no untoward effects were noticed.

Of the 256 patients, 7 died and 11 developed severe pulmonary infections but recovered. 5 references.

F. A. M.


The first dilute solution continuous spinal anesthesia was administered (by S. M. S.) in October, 1944. After the use of a urethral catheter to replace the malleable needle was suggested by Tuohey, the method of dilute solution continuous spinal analgesia was continued, using a catheter instead of a needle with shield. By the use of this method the complications of continuous caudal analgesia, and the undesirable features of spinal analgesia have been overcome. The anesthetic solution which is injected is so dilute that no somatic sensory effect could be detected. There was little or no motor paralysis involving the musculature of the thorax, abdomen, or extremities. The pain of labor contractions was abolished with solutions of pontocaine in glucose diluted to 0.05 per cent wherein 1/2 mg. per cc. was injected approximately once an hour. The patients were able to lie in any desired position and were able to move onto the delivery table without experiencing painful cramps of uterine contractions.

For the actual delivery the use of the dilute solution is discontinued and a more concentrated solution injected. A second syringe containing 4 mg. of pontocaine in 2 cc. of glucose replaces the syringe which contained the more dilute solution. The table is placed in reverse Trendelenburg position and the more concentrated solution is injected slowly.

In this series of 50 cases there has been no increase in operative or midforceps deliveries as a result of the anesthesia. There were no fetal or maternal deaths, no failures to enter the subarachnoid space or to introduce the catheter. There were no neurological sequelae. Postspinal headaches were not increased over the number one would expect in a similar series of patients who had spinal anesthesia, for general surgical procedures. There were no complications of any kind in the series. The first stage of labor did not seem to be retarded; the second stage was not prolonged. The third stage was of normal duration. Blood loss was minimal. The babies did not require resuscitation. In no case did the blood pressure fall. No toxic reactions occurred and no infections developed at the site of puncture. No supplemental anesthesia was required. The method seems to be a safe, practical procedure with many advantages over continuous caudal analgesia. 4 references.

F. A. M.

Two methods of prolonging spinal analgesia have been available: (1) the concentration of the anesthetic drug and (2) the continuous spinal technic. A third method is presented in which relatively small amounts of anesthetic mixed with adrenalin prolong the analgesia. Two hundred patients were anesthetized with hyperbaric pontocaine-glucose solutions containing varying amounts of 1:1,000 adrenalin. Sensory analgesia was prolonged to almost double the time produced by pontocaine-glucose without adrenalin. Motor relaxation, although somewhat prolonged, was somewhat unpredictable as to length of time. Continuous spinal analgesia was used, because of this unpredictable duration of relaxation, in operations requiring more than two hours. By adding adrenalin to the anesthetic solution, the intervals between subsequent injections were widely spaced even with small doses.

“Pontocaine solution 1 per cent (20 mg. in 2 cc. ampules) was mixed with glucose, either 5 or 10 per cent, utilizing the following formula: mg. or cc. of pontocaine multiplied by three equals the total volume of diluted solution to enter the subarachnoid space.

... For continuous spinal a 10 cc. syringe is used, into which 30 mg. or 3 cc. of pontocaine is aspirated. This is diluted to 9 cc. with glucose solution. For any single spinal injection, regardless of whether 6, 8, 10 or 12 mg. of pontocaine is used, only .2 cc. of 1:1,000 adrenalin is added to the pontocaine-glucose mixture. For continuous spinal 6 cc. of 1:1,000 adrenalin is added to the 9 cc. mixture of pontocaine-glucose.”

The blood pressure was not noticeably increased by the addition of the adrenalin. No incidence of post-spinal headache was increased and other neurological sequelae were no greater after the use of adrenalin than when adrenalin was not used. No postoperative complications occurred in the series. None of the other vasoconstrictors which were used (methedrine, nesynephrine and epinephrine) was as effective as adrenalin. 2 references.

F. A. M.


In hospitals where obstetric facilities are available, the anesthesiologist and the obstetrician cooperate to care for parturient women. The choice of the analgesic and anesthetic for use in obstetrics depends on several factors. They are: “1. What is the physiopharmacologic action of the agent on both maternal and fetal structures? 2. What fetal or maternal diseases or abnormalities exist which may alter the selection of certain agents? 3. What agent or agents and method are best suited to the emotional and physical status of the mother? 4. Is the method used one which will afford the greatest safety to the mother and the infant?” Adequate relief of pain without systemic reaction, promptness of action and an effective means of countering over-effect are the criteria by which the agents should be evaluated. The advisability of totally relieving the pains of labor has been seriously questioned.

Some of the many methods of analgesia and anesthesia which have been proposed for obstetric use are not practical because they are too complex and technical. During the first stage of labor amnesia and analgesia are usually sufficient. At present, the combination of scopolamine and pentobarbital sodium is one of most effective means of conducting the first stage. Combinations of demerol, scopolamine and barbiturates have more analgesic and amnesic action. Morphine and pantopon should not be used within less than two hours from the time of de-