an abdominal section probably called for more skill than any method of anesthetizing before or since. The Vernon Harcourt inhaler was of great help in carrying out prolonged anesthesia with chloroform. The Roth-Drager apparatus, which required the use of oxygen, was an epoch-making advance.

Following the death of a patient during thyroidectomy, the author decided to give morphine and atropine as preliminary medication before anesthesia. This step, in the author's opinion, was a definite milestone on the road of progress in anesthesia. The next change was the revival of interest in "Basal anesthesia." The true value of basal anesthesia is perhaps for the future to determine.

The visit of Dr. Pitkin about 1928 gave a great stimulus to spinal anesthesia. The method is for those with great clinical experience and for the expert. The introduction, by Magill, of his intratracheal tube was a notable advance. The use of chloroform has been on the decline since the beginning of the century.

F. A. M.

HUDGINS, A. P.: *Spinal Anesthesia with Sedation in Obstetrics.* West Virginia M. J. 43: 233–235 (July) 1947.

One hundred consecutive deliveries at term or near term were given spinal anesthesia and sedation. During the early part, labor pain was controlled by sedation. Recently, nembutal grains, 3 orally, with demerol mg. 100 and scopolamine grs. 1/150 hypodermically have been used with good effect. The spinal anesthetic was given in the patient's room, usually when the cervix was completely dilated or when delivery was expected within two hours. The lateral position was used in order to avoid disturbing the effects of sedation as much as possible.

Pontocaine 18 mg. with equal parts of 10 per cent glucose was preferred because that dosage is used on surgical cases and the duration of effect and possible reactions are well known. The fetus was found to be in good condition. Breathing was spontaneous and the color was good. The one injection method avoids the disadvantages of a retained needle with the possibility of infection. Spinal tap is used more frequently and is less difficult than caudal block. Smaller doses of medication are needed and relief of pain is rapid.

After training the hospital staff as to the correct time to call the physician the system worked out satisfactorily. The physician is called before the head appears at the vulva. There were no failures nor were there any contraindications to the method in this series. Those patients who failed to receive the medication were those who delivered too rapidly or who came to the hospital too late for preparation, and a few who could not be given this form of anesthesia because the house staff failed to notify the physician in time. 8 references.

F. A. M.

HUGHES, E. S. R.: *Refrigeration Anaesthesia.* Brit. M. J. 1: 761–764 (May) 1947.

Twenty-five lower limb amputations have been done with the aid of refrigeration anesthesia since its introduction into the Royal Melbourne Hospital in 1944. Primary shock did not occur but secondary shock, though minimized, was not absolutely prevented. Bronchopneumonia caused the death of 5 patients. Two deaths resulted from renal failure. Although the author does not believe that all patients to be subjected to amputation should be anesthetized by refrigeration, it is submitted that this method be reserved for certain bad risk cases. 33 references.

F. A. M.