Operations that have been painlessly performed by the author under 'Trilene' Auto Analgesia are: Preparation of cavities for filling; removal of fillings in periostitic teeth; opening up of pulp chamber in periostitic teeth to allow drainage; opening of abscess in soft tissues; deep scalings; removal of pulps from single-rooted teeth; dressing of painful sockets after extractions. No doubt there are many other uses to which 'Trilene' analgesia can be put." 1 reference.

J. C. M. C.

HALTON, JOHN: *Kemithal Anaesthesia in Thoracic Operations.* Lancet 1: 771–773 (May 25) 1946.

"In patients requiring thoracic surgery there is usually a diminished vital capacity which is nearly always further reduced when they are placed in position for operation with the sound lung lowermost. Any anaesthetic or technique which tends to cause further embarrassment is therefore debarred. . . . A trial with soluble thiopentone as the sole anaesthetic was started two years ago. . . . The main anxiety arose from the fact that the dose of thiopentone required to produce a successful anaesthesia lay very near the toxic level. Too often a delayed recovery offset the obvious advantages of the technique. Then an opportunity was offered by Imperial Chemical (Pharmaceuticals) Ltd. for the clinical trial of 'Kemithal,' which soon proved to have many advantages over the other barbiturates. Laryngeal spasm was notably absent, jaw relaxation was extremely good, and respiration was not so depressed, yet controlled respiration with oxygen alone in a closed circuit was easily possible in most cases. For these reasons it was obvious that the anaesthetic dose was well below the toxic dose. More than 300 major thoracic cases have been anesthetised, up to date, with kemithal, and a routine technique for its administration has been worked out. . . .

"Induction is carried out by the injection of a 10% solution of kemithal. . . . The amount varies between 0.75 and 1.5 g., according to the requirements of the patient. If more than 2 g. is required the patient probably has a natural resistance to the drug, and experience shows that it is better to continue the anaesthesia by some other method. . . . Anaesthesia is maintained by the intermittent injection of 0.1 g., as the reaction of the patient to surgical stimuli demands. A lightening of the anaesthesia is heralded by an increase in pulse-rate, deepening and increase in respiratory rhythm, and a return of the cough-reflex; this if allowed will pass on to swallowing, incoordinated movements, and actual phonation. . . . In a long operation, when the dose of kemithal has reached 4.5 g., it is preferable to maintain anaesthesia with minimal cyclopropane rather than continue with the intravenous barbiturate. . . . Recovery is rapid, the postoperative condition of cases is consistently good, and vomiting and restlessness are rare. The use of d-tubocurarine chloride in conjunction with kemithal in 40 cases has produced promising results."

J. C. M. C.

RAPPAPORT, F.: *An Anesthetic with Prolonged Action.* Acta Med. Orient. 5: 115–116 (April) 1946.

"It is often desirable to prolong the transient effect of a local anesthetic over a longer period of time. . . . Oily solutions have various disadvantages. . . . In order to overcome these disadvantages, and yet to obtain a prolonged anesthetic action, the following course was pursued: In contradiction to the oily solvents mentioned above, water-miscible organic solvents were used only. Instead of the water-soluble salts of the procaine series, the base

insoluble in water was used. This base is dissolved in an organic solvent. The organic solvent used is the pharmacologically known methyl acetamide. In a 50% watery solution, the procaine (novocaine) base is in an unstable equilibrium. The addition of the smallest amount of water causes the precipitation of the base. In order not to be dependent on one solvent alone, it has been tried to replace it by urethane. . . . But the water-insoluble benzocaine (anestesine) in a solution of 1–2% was satisfactory. . . . On injection, the body liquid—an aqueous solution—rapidly comes into contact with the liquid injected and precipitates the anesthesine dissolved therein. The solvent is absorbed very quickly, whereas the benzocaine which is quite insoluble remains at the site of injection in a finely dispersed form. The anesthetic action continues until the benzocaine is completely absorbed. In this way it acts as a depot, having the side effects of oily solutions. . . . The anesthetic effect lasts 9 to 28 days. No macroscopical or microscopical harm to animals could be ascertained." 3 references.

J. C. M. C.

THOMSON, F. B.: *Postoperative Early Rising.* Canad. M. A. J. **54**: 559–560 (June) 1946.

"On the basis of recorded experience it was decided to institute a postoperative early rising program at Trenton and St. Thomas R. C. A. F. Hospitals. . . . Between November 1944 and June 1945, 79 herniotomies, 16 appendectomies and 2 cholecystectomies were treated by this method at R. C. A. F. hospitals at Trenton and St. Thomas, Ontario. These cases were nearly all under 30 years of age. Spinal anaesthesia was used in all cases. . . . Headache lasting over 48 hours occurred in 16 cases. It was necessary to discontinue the routine in these cases and institute full time bed care. Serious postoperative respiratory infection was rare despite the fact that the cases were operated on during the winter months with many upper respiratory infections in preoperative cases on the ward. Early rising has been found by several authors to maintain the vital capacity at a more nearly normal level during the postoperative period. This and the early coughing of mucus from trachea and bronchi assist in preventing atelectasis and respiratory tract infections. The wounds healed normally and showed no undue tenderness or weakness. . . . It was observed that these patients were able to walk about the ward without discomfort by the third or fourth postoperative day." 6 references.

J. C. M. C.

SCOTT, C. C., AND CHEN, K. K.: *The action of 1,1-diphenyl-1-(dimethylaminoisopropyl)-butanone-2 a Potent Analgesic Agent.* J. Pharmacol. & Exper. Therap. **87**: 63–71 (May) 1946.

"In spite of numerous attempts to find new analgesic compounds superior to morphine or other opium alkaloids, little progress was made until 1939 when Eisleb and Schaumann reported the action of dolantin (demerol), a substance producing both morphine-like and atropine-like effects. Following the Allied victory of World War II, knowledge of additional related compounds, prepared by German chemists, became available. . . . Of the many compounds disclosed, 1,1-diphenyl-1 (dimethylaminoisopropyl)-butanone-2 appeared to be outstanding. This compound bears the German serial number 10820. . . . We undertook an investigation of the actions of 10820. . . . It is a white crystalline compound, soluble in water and alcohol, but insoluble in ether. . . . For brevity, the product will be referred to as a butanone de-