

systems than when morphine was employed. By the use of demerol and scopolamine, a sufficient degree of analgesia was produced to permit the use of local anesthesia for delivery in 48 per cent of the entire series, and in 83 per cent of the last 56 cases. The only cases in this series in which local anesthesia could not be employed were those in which delivery was difficult. The patients occasionally encountered who become irrational following the use of analgesics cannot, of course, be delivered under local anesthesia. By making it possible to deliver most patients under local anesthesia, the use of demerol tends to remove several hazards incident to inhalation anesthesia and thus increases the safety of modern obstetrics." 2 references.

HAYWARD-BUTT, J. T., AND CAMP, B. A.: *Trilene Analgesia—Simple Apparatus for Self-Administration*. *Lancet*. 2: 865–867 (Dec. 13) 1947.

"During the late war there was a great demand for a rapid and safe analgesic capable of use with no more than printed instructions. Early experience with assault landing troops showed that a satisfactory, though short, analgesia could be induced with a wool plug soaked in "Trilene" in an ordinary "Benzedrine" nasal inhaler. From these observations . . . an instrument was gradually evolved for the use of commandos, air, naval, and tank crews, and ambulance personnel, as well as to meet most of the normal medical requirements of trilene analgesia. . . . The inhaler . . . is of metal. $8\frac{1}{4}$ inches long and $\frac{7}{8}$ inch in diameter, and weights 10 oz. when fully loaded. It is designed on the principle of a cigarette lighter with an absorbent cotton-wool pad and a capillary wick leading trilene from a 6 ml. ampoule into a vaporising chamber seated in a nasal nozzle. This volume of trilene is just enough to saturate the pad

without producing any fluid excess. and though sufficient for analgesia lasting sixty to ninety minutes is insufficient to produce anaesthesia. The inhaler is brought into use by breaking the base of the ampoule with a spring plunger. . . . The inhaler is used in a similar way to the familiar nasal inhalers, and, if the patient is told this, it will be correctly used at once. . . .

"It has been tested by 37 of my colleagues in 1183 cases comprising 67 different painful conditions. Analgesia was 'good' in 85 per cent of cases, 'fair' in 9 per cent and in 6 per cent failed to develop at all. This efficiency is equal to that attained with larger and more complex machines." 4 references.

J. C. M. C.

KATZ, R. A.: *Diethyl Oxide: New Therapy in Impending Gangrene*. *Clin. Med.* 54: 92–94 (Mar.) 1947.

"Therapy in arteriosclerosis and associated ischemic states has reached a terrifying low stage in medical interest, and this in the face of statistics which point to diseases of the blood vessels as being the greatest single cause of morbidity and mortality in America. . . . A preliminary report after nearly two years study on the effect of diethyl oxide (U.S.P. diethyl ether) in the therapy of ischemic states has been presented for clinical evaluation by the profession. The term diethyl oxide is used because of the adverse psychological effect in patients when the term 'ether' is used. . . . Both the diethyl ether (anaesthetic ether) and the dilution media should be refrigerated before being mixed. After adding the ether, the solution should be shaken. It is important to surround the infusion bottle with two ice bags. This is important since the vapor pressure of the ether rises rapidly in a warm environment and hence will leave the solution, thereby doing very little good.

I use a Huber point No. 21 gauge needle to administer the ether solution. Care should be taken to preserve veins by using careful technic. We are at the present time experimenting with the use of anti-coagulants in the hope of preserving veins longer. This will be reported later.

"A patient meeting the criteria of ischemia is given 1000 cc. of a 2½ per cent solution of diethyl oxide. This is equivalent roughly to the addition of 25 cc. of diethyl ether to 1000 cc. of dilution media. The dilution media that have been used were standard 1000 cc. flasks of prepared solutions. In the actual necrotizing lesions, a sixth molar lactate solution was used; isotonic sodium chloride for uncomplicated cases; and dextrose in distilled water for arteriosclerotic patients with hypertension. A course of therapy for patients with nongangrenous lesions, and suffering from ischemia and unrelenting pain as in claudication, is 24 liters of 2 per cent diethyl oxide. These infusions are given daily. The rate of administration may range from 75 to 105 drops per minute. Indications for therapy with diethyl ether are two: Pain, and Impending Gangrene. . . . Where pain is the paramount complaint, the patient should receive at least one or two, 2½ per cent ether infusions daily. . . . Good results have been achieved in severe arteriosclerotics among nondiabetics and diabetics who have received as many as 65 treatments—actual improvement in several cases being delayed for as many as forty days. The usual response in the average patient is to see a very definite relief of symptoms in an average of five to seven days. The plan of treatment in acute thrombotic or embolic gangrene would appear to be immediate sympathetic block to release the vasospasm and to protect the leg by allowing the peripheral collateral blood supply to take over. Supplementing

this acute process, diethyl oxide is indicated; two liters daily until the actual danger has passed. . . . The actual mechanism of action of this agent is not accurately known. . . .

"To date, the preliminary statistics with this method have been very heartening. The bulk of the patients treated were arteriosclerotics and diabetics. Others that have responded were patients with Buerger's disease, Raynaud's disease, causalgia, and one patient with arterial thrombosis of the subclavian artery. The most promising single attribute of this simple agent is its ability, when successful, to relieve pain, ischemia and edema. Actual arrest of the necrotic process has been seen and a reparative process begun. No untoward toxic effects from diethyl oxide have been observed." 6 references.

J. C. M. C.

LILIENFELD, A. M., AND DIXON, D. Mc.: *Sigmodal in Obstetrics. Clinical Observations with a Report of Three Reactions.* Bull. School Med. Univ. Maryland. 31: 135-143 (Apr.) 1947.

"It is desired to report some clinical experiences (including three severe reactions) with an obscurely known barbiturate whose use was first investigated clinically by Emmert and Goldschmidt in 1936. . . . This preparation is marketed under the trade name of Sigmodal. . . . Sigmodal, as the name implies, is administered rectally. . . . Sigmodal produces both analgesia and amnesia with the latter outweighing the former effect. . . . A total of 391 patients, who had sigmodal administered during labor, were studied. Some of these patients received the second-sigmodal routine; some received sigmodal alone, and others received sigmodal and demerol intra-muscularly. . . . There are several types of untoward reactions which were observed to occur in patients following sigmodal