

symptoms, and comprised a total of 16 patients. . . . It is well established that if, after the interruption of the vasoconstrictor pathways to an extremity, that extremity is exposed to a cold environment, the skin temperature of the blocked limb tends to be higher than the unblocked limb; at least 2.5°C . higher. The skin temperature of the unblocked limb, however, tends to approach the cool environmental temperature. In our series we tried to determine how long this temperature difference was maintained, and . . . as long as a significant difference in temperature existed in the two limbs at corresponding areas, vasodilatation as a result of the block was considered to be present. . . . The use of 100% alcohol in lumbar paravertebral block is of definite value in producing peripheral vasodilatation. This vasodilatation may be complete, and may last for varying periods of time, even up to 2 years and perhaps longer. The neuritis that is produced as a result of such a procedure occurs more often when larger amounts of alcohol are injected; it is not too severe and in no instance has lasted more than 45 days. The use of novocaine in sweet almond oil did not reduce the incidence of neuritis. Vasodilatation occurred more often when larger amounts of alcohol were used, but the amount of alcohol was not the factor that determined how long this vasodilatation lasted. There was no correlation between claudication time and the degree or duration of vasodilatation." 9 references.

J. C. M. C.

MILLAR, A. M.: *A Portable Warmed Ether-and-air Anaesthetic Apparatus*. Brit. M. J. 1: 623 (May 6) 1944.

"The object in designing this apparatus was to provide a machine which would be easily portable and deliver a

warm mixture of ether and air, the concentration of which could be changed rapidly or maintained the same for a period of time, and to ensure that the mixture would arrive at the face warm. . . . The apparatus consists of two bottles, each fitted with a drip feed which is controlled by a needle valve a quart vacuum flask; a U-tube of $\frac{3}{4}$ in. diameter copper tubing, with one end open to the air and the other having a one-way directional valve permitting air to be drawn through the tube but not returned; a short length of rubber tubing ($\frac{3}{4}$ in. diam.); a face-piece and expiratory valve. . . . The vacuum flask is filled with hot water, and the U-tube immersed in it. Ether is put in one bottle and vine-therene anaesthetic mixture into the other. Either of these is fed into the U-tube, where it drops into the hot water and vaporizes, mixing with the air, which has already become warm while in the U-tube. This mixture is drawn in by the patient. As the ether lands on the hot tubing it makes a hiss which is easily heard, thus indicating the rate of flow. This varies with each case and as the case goes on. To ensure that too great cooling does not take place before the mixture reaches the patient's face, the length of tubing used is not more than 12 in. long."

J. C. M.

BINNING, REX: *The Use of Cyclopropane in the Field*. Brit. M. J. 620-621 (May 6) 1944.

"Shortly before the second battle of Alamein I received . . . a cylinder of cyclopropane for use in the forward areas. Since then I have had a small but adequate supply, and I have used it at a C.C.S. during the Eighth Army's advance almost to the end of the campaign, at a field surgical unit for the Sicilian campaign, and also for four months in Italy, from the landing at Salerno onwards. . . . Approxi-

mately 1,200 cases were anaesthetized by me during this time. Pentothal alone was the drug used in 80 per cent of the cases; cyclopropane, with or without the addition of nitrous oxide or occasionally ether in 10 per cent; local anesthesia in 5 per cent; and intravenous morphine in 5 per cent. The cyclopropane was reserved for the penetrating wounds of the abdomen, the thoraco-abdominal wounds, and those few cases which were regarded as very bad risks and had failed to respond to resuscitative measures. It was found to be of great value in all these cases. . . . The machine used was a Rochester Lundy Heidbrink. It has travelled many hundreds of miles over bad roads and tracks, and has been packed and repacked many times without damage. Two hundred and seventy gallons of cyclopropane have been used for 120 operations. The economy in cylinders thus effected is most striking. If semi-closed nitrous oxide, oxygen, and ether had been used in these cases about 120 100-gallon cylinders of nitrous oxide would have been required instead of the three cylinders of cyclopropane of the same size."

J. C. M. C.

NIXDORF, W. B.: *Anesthesia Department Report, with Pertinent Comments*. Harper Hosp. Bull. 2: 25-29 (Apr.) 1944.

"Three significant trends have developed in the Anesthesia Department [Harper Hospital, Detroit] during the past year: 1. More extensive use of local block anesthesia with or without intravenous sodium pentothal. 2. Replacement of procaine with monocaine formate for block anesthesia. 3. Substitution of the ureteral catheter technique for the Lemmon technique in continuous spinal anesthesia. While local block anesthesia with intravenous sodium pentothal has not been too generally employed in the past, it has been

found extremely useful for a variety of reasons during the past year. In most instances, the anesthesia has been highly satisfactory, particularly in those cases which would have survived no other anesthetic procedure. It is to be remembered that the local block is the major anesthesia, while the pentothal is only a secondary analgesic agent. After premedication with no more than 1/8 gr. morphine sulphate, most cases have required only 15-25 cc. of a 2½ per cent solution of sodium pentothal for abdominal procedures lasting 30 to 90 minutes. . . . Replacing procaine is a relatively new local anesthetic, monocaine formate, closely related to the older monocaine hydrochloride that has been in common use by the dental profession. . . . Experience indicates that the drug is more efficient in a 1 per cent solution than any other similar agent in a 2 per cent solution. It has been used without the addition of a vaso-constrictor. Its toxicity is low, comparing favorably with that of metycaine. The duration and depth of anesthesia produced has exceeded our fondest hopes. This is, of course, a tentative opinion because of the small number of cases in which it has so far been used. The drug is of no particular value for subarachnoid use since its action seems to be somewhat delayed and there is only slight increase in the duration of anesthesia. This, combined with an extremely rapid rate of diffusion in the spinal fluid, making the drug dangerous except in the most careful and adept hands, has caused us to discontinue its use for this purpose. . . . Because it has a greater margin of safety than any other cocaine derivative, procaine remains the drug of first choice for intrathecal anesthesia."

J. C. M. C.

KELLY, F. H.: *Anesthesia of Protoplasm*. J. Indiana M. A. 37: 17-18 (Jan.) 1944.