

ent status of total spinal anesthesia is this, however. It is considered by most operators to be too perilous a procedure for use, save in most unusual circumstances. This statement will no doubt be modified in the near future. . . . Anesthesia for surgery in the upper abdomen should extend to the nipples to assure proper relaxation in the operative field. For this 150 to 200 mg. of novocaine or neocaine properly used will usually be sufficient. Our choice for upper abdominal surgery is that of a nupercaine dilute 1:1,500 solution, and should be given according to Jones' technique. We have found his dosage may be minimized. Pre-operative medication is of assistance, but it should not be overdone. Oxygen or carbogen is very useful; adrenalin and ephedrine are invaluable. Although the drugs at our disposal at the time are very satisfactory, nevertheless we should be on the lookout for better ones. . . . All nerves of the body without exception transverse the subarachnoid space and are easily blocked by intrathecal anesthesia. The future progress of anesthesia depends a great deal upon this fact."

J. C. M. C.

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 HAN, L. V., AND SISE, L. F.: *Nupercaine Anesthesia*. Surg. Gynec. & Obst. 71: 9-21 (July) 1940.

"With certain operations it is desirable to have anesthesia of longer duration than that produced by pontocaine, but without any increase in depressive effects; in others a hypobaric solution is preferable because of the position of the patient during operation. In these cases we have selected nupercaine, 1:1500 dilution. Therefore, the use of this drug is limited to two general types of operation: first, long upper abdominal operations, chiefly gastric resection; and second, operations of positional importance in which a hypobaric solution is indicated. Due to the limi-

tations noted the number of these cases is necessarily small. . . .

"The prolonged anesthetic effect from very small doses of nupercaine is highly desirable in prolonged and extensive procedures on poor risk patients; in certain operations of positional importance a hypobaric solution is indicated rather than a hyperbaric solution. . . . The solution recommended is a 1:1500 dilution in 0.5 per cent. sodium chloride. . . . The technique is Woodbridge's modification of the W. H. Jones technique. The dosage is governed chiefly by the sex and height of the patient. Frequent early skin testing is an important factor in minimizing the occurrence of undesirable degrees of respiratory embarrassment; if this does occur the use of oxygen is a valuable adjunct. In the past, supplementary anesthesia was resorted to after the appearance of untoward effects; at present, supplementary anesthesia is frequently resorted to, early, to suppress these effects. We have found pitressin-ephedrine mixture an excellent vasomotor stimulant to combat undesirable fall in blood pressure. The total number of cases with nupercaine anesthesia is 251; 180 with the recommended solution and technique. . . . These 180 cases are subdivided into group A or serious risk major operations of anticipated long duration, numbering 138, and group B or operations in which the immediate position of the patient indicates a hypobaric solution. The majority of cases in group A are moderate to decidedly poor grades of risk, and the duration of anesthesia with a minimal depressive effect, characteristic of the nupercaine anesthesia, probably lessens operative hazards in these serious risk patients. Supplementary anesthesia is resorted to not because of an unsatisfactory drug or faulty technique but rather to lessen the technical surgical difficulties and to alleviate mental and physical dis-

comfort to the patient. Nupercaine in the solution and dosage recommended has very little or no depressive effect on the cardiovascular system. . . . The incidence of complications is chiefly dependent on the type of operation and grade of risk."

J. C. M. C.

VOLPITTO, PERRY P.: "*Intracaine*" in *Regional Anesthesia*. (A Clinical Report.) *South. Med. J.* 33: 1029 (Oct.) 1940.

Volpitto states that intracaine (beta diethylamino ethyl p ethoxy benzoate hydrochloride) a benzoic acid derivative is reported to have about the same toxicity as procaine, and is supposed to be effective in about half the dosage for periods twice as long.

The author reports the use of the agent in 100 cases. One per cent. was used for nerve blocks; one half per cent. for infiltration anesthesia. No epinephrine was used but all patients were premedicated with small doses of barbiturates. Seven failures are reported, due to lack of proficiency of individual administrators. No local or toxic reactions occurred. It is concluded that the series is inadequate to evaluate the agent, that it is capable of producing satisfactory anesthesia with no apparent immediate or latent toxic effects, that longer duration of anesthesia was not established, and that it compares favorably with procaine in similar concentrations.

C. P. W.

SILVERS, H. I., AND LEONARD, I. E., JR.: *The Use of Neosynephrin Hydrochloride in Maintaining Blood Pressure During Spinal Anesthesia*. *Am. J. Surg.* 50: 79-83 (Oct.) 1940.

"One of the major problems in spinal anesthesia is the constantly falling blood pressure. Epinephrine and ephedrine, especially the latter, have been used to preserve its stability. . . .

Neosynephrin hydrochloride is a synthetic drug resembling epinephrine and ephedrine both structurally and pharmacologically. . . . In our series of fifty cases of spinal anesthesia using neosynephrin hydrochloride as a vasoconstrictor, we were impressed by the ready and repeated response of the blood pressure; the bradycardia and the lack of arrhythmia; and the absence of nervousness or anxiety on the part of the patient. . . .

"Neosynephrin hydrochloride is an effective aid in maintaining the stability of blood pressure during spinal anesthesia. A definite bradycardia generally occurs after its administration. Deleterious effects such as arrhythmia, palpitation, anxiety or nervousness were not manifest if neosynephrin was given in therapeutic doses. The margin of safety of neosynephrin is greater than that of epinephrine or ephedrine. It is not effective in cases where there is loss of blood volume or shock caused by toxic conditions such as peritonitis. Until its exact action on the heart has been proved, it is best to use small doses or abandon its use entirely in cases which present serious cardiac pathology."

J. C. M. C.

WOODBIDGE, P. D., HORTON, J. W., AND CONNELL, KARL: *Prevention of Ignition of Anesthetic Gases by Static Spark*. *Brit. J. Anesth.* 17: 62-64 (July) 1940.

"As a result of our investigation of a fatal anesthetic explosion, a means of preventing ignition of anesthetic gases by static spark has been devised which we believe to be of sufficient value to warrant general adoption. Conditions were set up which duplicated those existing at the time of the explosion, and various observations were made. . . . The conclusions follow: Adequate protection against electrostatic sparks is not necessarily obtained by relative hu-