

the needle for blocking in the first intercostal space. From this point a line is marked downwards as far as the eighth rib at a distance three fingers' breadth from the midline. . . . The fluid disperses into the space containing nerves and vessels, blocking pain sense in the nerves, and causing ischaemia in the arteries and veins. The needle in the first space is now withdrawn, while the second remains in place as a guide to the third. In this way the injections are repeated as far as the seventh. In a few cases the eighth space has been injected, but it confers no advantage. . . . When the posterior intercostal injections are finished, the patient is rolled back onto the first table again, into a supine position, for the remaining injections. Any of the 0.75 per cent solution left over is poured into the third beaker. A wheal is made over the clavicle. Through this a sufficiently long needle is inserted towards the shoulder, as far as the acromion. During the withdrawal (all such injections are given during withdrawal) a line of 0.5 per cent solution is deposited at the rate of not less than 1.5 mils per centimetre, or more in obese women. In the obese the line should run deep in the fat, because the nerves are in the deepest part. The needle is now introduced in the reverse direction, and a continuation of the line is run to a point on the head of the clavicle of the other side. When this is done, the needle is inserted through the end of the anesthetized strip near the head of the clavicle, and passed down at a right angle to its former direction. A line of injection is run downwards parallel to the sternum, and about a finger's breadth from it. When it reaches the costal margin the direction is again changed, the line being run across the epigastrium and thence along the course of the eighth rib of the affected side. It continues along the rib as far

as a point well over the edge of the latissimus, and there stops. This long encircling line blocks the descending cervical nerves as it crosses their path over the clavicle. Along the eighth rib it blocks overlapping supplies from the eighth and ninth intercostals. In its intervening part, parasternally and across the epigastrium, it produces analgesia sufficient for any ordinary amount of undercutting. As a further effect, we can expect the encircling injection to diminish in some degree haemorrhage through blood supplied from across the border. . . .

"This completes the analgesic injections. Now follows a series planned to restrain haemorrhage. These are (1) internal mammary, (2) pectoral, (3) thoraco-dorsal, and (4) lateral intercostal. They utilize the 'physiological tourniquet' effect of adrenaline, and could be carried out just as well with simple 1 in 200,000 adrenaline solution, though personally I have always used the familiar solution of 0.5 per cent. ethocaine in 1 in 200,000 adrenaline solution. Since the injections are made in an already anesthetized field, preliminary skin wheals are not necessary. . . . During the operation the patient lies usually in a state of quiet euphoria. Sometimes she is very sleepy or asleep. Occasionally, she is garrulous, querulous, or maudlin. Restlessness is extremely uncommon, and if it occurs it is not seriously troublesome. Now and then there are some flushing and quickening of the pulse, apparently due to the hyoscine." 1 reference.

J. C. M. C.

MERRICK: *Degeneration and Recovery of Autonomic Neurons Following Alcoholic Blocks*. *Ann. Surg.* 113: 298, 1941.

Alcohol injected into the immediate vicinity, or better directly into an autonomic ganglion, resulted in complete destruction of this unit. This was the

only way in which permanent autonomic block could be brought about. When only the rami were blocked, regeneration and recovery of function are possible. In such instances alcohol merely dissolves the myelin of the nerve sheath, leaving the pathway still intact for regeneration.

R. D. D.

BOSTON, F. K., AND JAMES, N. R.: *Rectal Hexobarbitone Soluble: a Useful Form of Basal Anaesthesia*. Brit. M. J. 1: 5-7 (Jan.) 1941.

"We have three main routes at our disposal for the administration of a basal anaesthetic: the oral, the intravenous, and the rectal. . . . We have used the [rectal] method . . . on more than 250 cases. . . . There is usually complete amnesia of the journey to and from the theatre and for some hours afterwards. . . . Less inhalation anaesthetic is required. The incidence of postoperative vomiting seems to be less than when inhalation anaesthesia is used alone. Compared with avertin, hexobarbitone soluble is easy to prepare and administer and rejection does not occur. The method is very suitable for combination with local infiltration and field block anaesthesia. . . . The above advantages, especially ease of preparation, make it suitable for Service patients under war conditions. . . . The only untoward effects we have observed have been as follows: Restlessness in a few patients. . . . In only two cases has undue respiratory and circulatory depression been seen in patients premedicated with morphine; these were given an unnecessarily deep ether narcosis following a full dose (e.g., 0.2 gramme per pound body weight) of rectal hexobarbitone. Since we have gained more experience in dosage we have not seen this complication. The above patients responded to intravenous coramine and inflation with oxygen. A second disadvantage was the

length of the period of postoperative unconsciousness; this might be a disadvantage in certain cases, such as when fluid therapy by mouth is indicated as soon as possible after operation—e.g., partial thyroidectomy, etc. The contraindications are those which apply to basal anaesthesia in general." 2 references.

J. C. M. C.

MALONEY, A. H.: *Picrotoxin in Acute Barbiturate Intoxication*. Clin. Med. 48: 34-37 (Feb.) 1941.

"The data presented in this study were derived from two general sources: (1) current medical literature, 66 cases; and (2) direct communications in answer to a questionnaire sent to 200 carefully selected hospitals and interested clinicians in the United States, 54. . . . In our review . . . we have found a total of 120 treated cases, with a fatal outcome, from all causes, in 20. . . . Of the 20 fatalities, 6 died acutely (one from right-side heart failure; 3 from undetermined causes; and 2 from depression), and 14 died from complications, chiefly pulmonary. . . . The efficacy of picrotoxin has been generally attested by all those who have had experience with its use in severe barbiturate poisoning." 9 references.

J. C. M. C.

BURSTEIN, C. L.: *Respiratory Depression During Anesthesia Attributable to Carotid Sinus Disturbances: a Clinical and Laboratory Study*. New York State J. Med. 40: 1767-1772 (Dec. 15) 1940.

"No function of the organism is so varied in its control as is pulmonary ventilation. Although there has been described a definite respiratory center in the formatio-reticularis of the medulla which regulates respiration, this center is merely the servant of a horde of impulses which reach it by way of practically every afferent nerve in the