

nephine infusion caused a rise in blood pressure, but there was no pulse increase during postural hypotension and no overshoot following the Valsalva maneuver. As a result of dysfunction of the autonomic nervous system, the clinical evaluation during anesthesia of a patient with SDs is made difficult, because sweating, tachycardia, and blood pressure changes cannot be used reliably as indicators of the depth of anesthesia.

Epidural anesthesia was selected because of the assumption that a partially "sympathectomized" person would have less hypotension with this technique than would a normal individual. There was no evidence of sympathetic blockade or a sensory level following the two injections of mepivacaine that would explain the hypotension observed following induction of general anesthesia. Systemic absorption of 375 mg of mepivacaine appears unlikely to be the cause of the observed hypotension. It is interesting that despite hypersensitivity to norepinephrine preoperatively, the patient responded in a normal manner to phenylephrine. The marked hypotension following light general anesthesia with MOF was due to a decrease in peripheral vascular tone, since the cardiac output did not decrease. This exaggerated hypotensive response to MOF appears to resemble that observed in cats whose barostatic reflexes have been abolished following section of buffer nerves.⁷ Halothane does not cause a similar depression of the barostatic mechanism in identical animal preparations.⁸ It would seem reasonable, therefore, to expect halothane not to cause

unusual hypotension in patients with SDs. One may further speculate that cyclopropane and ether, both of which depress the baroreceptor reflexes in rabbits more than does halothane,⁹ may cause marked hypotension in these patients, as did MOF in the present case.

The author thanks Dr. James Hinkle for measuring the cardiac output and Drs. Robert D. Dripps, Donald L. Clark, and Henry L. Price for their advice in the preparation of the manuscript.

REFERENCES

1. Shy GM, Drager GA: A neurological syndrome associated with orthostatic hypotension: A clinical-pathologic study. *Arch Neurol* 2: 511-527, 1960
2. Chokroverty S, Barron KD, Katz FH, et al.: The syndrome of primary orthostatic hypotension. *Brain* 92:743-768, 1969
3. Thomas JE, Schirger A: Idiopathic orthostatic hypotension. *Arch Neurol* 22:289-293, 1970
4. Schatz IJ, Podolsky S, Frame B: Idiopathic orthostatic hypotension. *JAMA* 186:537-540, 1963
5. Hohl RD, Frame B, Schatz IJ: The Shy-Drager variant of idiopathic orthostatic hypotension. *Amer J Med* 39:134-141, 1965
6. Martin JB, Travis RH, Van der Noort S: Centrally mediated orthostatic hypotension. *Arch Neurol* 19:163-173, 1968
7. Skovsted P, Price HL: The effects of methoxyflurane on arterial pressure, preganglionic sympathetic activity and barostatic reflexes. *ANESTHESIOLOGY* 31:515-521, 1969
8. Skovsted P, Price ML, Price HL: The effects of halothane on arterial pressure, preganglionic sympathetic activity and barostatic reflexes. *ANESTHESIOLOGY* 31:507-514, 1969
9. Biscoe TJ, Millar RA: The effects of cyclopropane, halothane and ether on central baroreceptor pathways. *J Physiol* 184:535-559, 1966

Obstetrics

CARDIOVASCULAR DYNAMICS Serial hemodynamic measurements were made in 17 healthy pregnant women undergoing repeat cesarean section at term under thiopental, nitrous oxide, and succinylcholine anesthesia. Peak cardiac output reached 7 l/min (41 per cent above control values) ten minutes after delivery. A maximum arterial pressure of 131/82 mm Hg (18 per cent above control values) was found just prior to delivery. Peripheral resistance showed little change except for a slight decline post partum. The hemodynamic fluctuations were found to be significantly smaller than those previously reported during cesarean section under subarachnoid block anesthesia and during labor and vaginal delivery under local and caudal anesthesia. From the hemodynamic data presently available, cesarean section under balanced anesthesia should be considered as an alternate method for delivering the infant of the seriously ill, pregnant cardiac patient (Classes III and IV). (Ueland, K., and others: *Maternal Cardiovascular Dynamics*, *Amer. J. Obstet. Gynec.* 108: 615 (Oct.) 1970.)