

### Stellate Ganglion Blockade and The Cerebral Circulation

DESPITE a considerable increase in knowledge concerning the cerebral circulation which has occurred in recent years, in a large number of physiological states and in clinical disease, the role of the known autonomic efferents to cerebral vessels remains quite obscure. There seems to be little doubt, on the basis of studies in animals, that stimulation of the cervical sympathetic chain is usually capable of producing a modest vasoconstriction in various parts of the brain or that a comparable vasodilation may be produced by stimulation of the greater superficial petrosal nerve. The physiological role which these efferents play in man, however, has not been established. By measurement of cerebral circulation in patients without acute cerebrovascular disturbances, three independent groups<sup>1, 2, 3</sup> have found no evidence of cerebral vasodilation following stellate ganglion blockade, so that its rationale in similar patients remains to be demonstrated.

In animals, and less directly in man, vasospasm has been found to occur in the brain under certain conditions, and cervico-thoracic sympathetic blockade has been proposed in various forms of cerebrovascular accident in an attempt to alleviate a hypothetical aggravating spasm. It has not been shown that such spasms occur in the clinical conditions in question, that it would be effected by the cervical sympathetic chain if it did occur, nor that blockade of the stellate ganglia would relieve it. In a recent extensive study which measured cerebral circulation in acute cerebrovascular affections before and after such treatment, an increase in cerebral blood flow occurred only in those patients whose pretreatment values for that function were low;<sup>4</sup> to what extent that effect was attributable to the statistical artifact of regression toward the mean is not readily

determined. However, in the eight patients who improved clinically (out of the total of 28), cerebral blood flow invariably increased.

It is obvious that it will be many years before enough is learned about the pathological physiology of acute cerebrovascular lesions to constitute a self-sufficient basis for rational therapy. Meanwhile, questions regarding the efficacy of various forms of treatment are still capable of being answered on the basis of well controlled, objective, clinical studies. Reports in this field which attempt to fulfill those criteria are, unfortunately, very few,<sup>5, 6</sup> and do not as yet permit the conclusion that stellate ganglion blockade is of demonstrated value in acute cerebrovascular lesions as a whole or in any particular subgroup.

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### What Price Tranquilization?

THE overwhelming application of the phenothiazine group of drugs (tranquilizers) in clinical medicine, including premedication, has

provoked some people to re-evaluate the role of drugs of any kind in the control of the patient in the preanesthetic period. These drugs