S-I-3. The Posteromedial Hypothalamotomy for the Treatment of Behavior Disorders

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Autonomic and somatomotor responses upon stimulation of the posteromedial part of the hypothalamus were reported in 55 patients with aggressive or violent behavior and restlessness. The coordinates of the target points were 1 mm anterior to 3 mm posterior to the midpoint of the intercommissural line, 2 to 4 mm inferior to the intercommissural line and 2 mm lateral to the lateral wall of the third ventricle. Stimulation of the points mentioned above, caused rise in blood pressure, tachycardia, tachypnea and maximal dilatation of pupils. In the same time, somatomotor responses were induced; namely, the head of the patient tilted toward the side of stimulation and the ipsilateral eye moved to medioinferior direction. Electroencephalographically, desynchronization or diffuse irregular delta waves of high voltage were induced in all leads and continued several minutes after the cessation of the stimulation. Points where sympathetic reactions were most marked, were electrocauterized bilaterally. During the follow-up period of more than 2 years, this operation produced marked calm effects, namely, 43 cases out of followed up 46 cases remained in good results.

Cases with violent behavior showed higher plasma levels of nonesterified fatty acids (NEFA). These were markedly elevated by electrical stimulation of the posteromedial hypothalamus and after destruction plasma levels of NEFA decreased in normal level.

S-I-4. Psychosurgical Methods from Psychiatry

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Over thirty five years have elapsed since psychosurgery was hailed as an epoch-making somatic treatment in psychiatry. But marked decline in its popularity followed because the frequent misuse of the extensive prefrontal lobotomy for many deteriorating schizophrenics yielded unsatisfactory results. The introduction of the psychotropic drugs increased this tendency. Some psychiatrists, especially in Japan, have been critical and over-sceptical of the psychosurgical approach to relieve the most tortured psychiatric patients. However, psychosurgery still has a definite application in certain well-selected cases. Choice of patients is the vital factor. Choice