therefor about 10 minutes until it drops sharply to zero. But if the artificial respiration is performed in this critical point, the blood pressure increased remarkably maintain its previous level.

Total spinal anesthesia was associated with R-R prolongation, disappearance of P wave and T deSpression in electrocardiogram.

Bradycardia became much conspicuous when ineffective respirations continued and anoxia increased. It was considered that the normal cardiovascular reflex are from the sinus, vasomotor center, and the heart had been cut centrally. If observation was continued without manipulation, electroencephalogram became flat which is considered be an important sign of death lately. Even in these period ECG did not display remarkable changes between those of slow wave pattern period. We tried in two dogs 60 to 90 seconds after complete flattening in electroencephalogram to resuscitate by artificial respiration in vain. On the other hand, complete flattening in EEG was found to be prevented by an effective artifical respiration, at least, such has been the rule in our experiments.

We ascertained that it could be performed quite safely only if respiration is controlled carefully. Moreover, it is clear that the total spinal anesthesia is a much simple procedure to cause general anesthesia. The days when it is widely utilized for clinical purposes will not be so far.

P. Stereotaxic Surgery

p-1. Stereotactic Thalamotomy in Patients with Central Pain

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Ten thalamotomies were performed in 4 patients with central pain by stereotactic surgical technique.

Case 1 was a 48-year-old man with postapoplectic thalamic syndrome of the left side. In this patient 4 thalamotomies were performed from Jun. 1966 to Nov. 1967. Its lesions were made in r-Pf., r-CM., r-V.c.pc. and 1-CM. of the thalamus. After r-CM. thalamotomy his severe chronic pain and hyperpathia disappeared and 1 week later dysaesthesia appeared again on his left half side of the body. This unpleasant sensation was not alleviated by r-CM., r-V.c.pc. and 1-CM. thalamotomies.

Case 2 was a 25-year-old lady with central pain of the left leg of unknown origin. R-CM. lesion diminished her chronic pain and improved other modalities of sensation. 2 months later her pain appeared again without dysaesthesia.

Case 3 was a 35-year-old man with postapoplectic thalamic syndrome of the leftside. In this patient 4 thalamotomies were made in r-CM., r-Pf., r-V.c.pc. and l-CM. from Feb. 1968 to Aug. 1968. 3 days after r-CM. lesion his pain appeared again. After r-V.c.pc. lesion his pain disappeared with impairment of touch and pain sensation and dysaesthesia appeared after 1 week. 2 months after the operation his pain came back again. L-CM. lesion and bilateral cingulumotomies had no good effect on his pain and dysaesthesia.

Case 4 was a 82-year-old man with postapoplectic thalamic syndrome on the left side. R-CM. thalamotomy was performed on Sep. 10 1968. His pain and dysaesthesia were alleviated by the operation but 1 month later mild pain came back.

In patients with central pain thalamotomies in various portion were not so effective as those of peripheral pain. Recidive of pain and unpleasant dysaesthesia appeared from 1 to several weeks after the operation. Bilateral CM. thalamotomies did not relieve these complaints. V.c.pc. thalamotomy was followed by the impairment of touch and pain sensation. In these thalamotomies there were no disturbance of consciousness and no motor deficit. In order to relieve the central pain it may be necessary to destroy other thalamic nuclei or to make much more larger lesions.

p-2. Clinical Encephalographical Studies on Orbito-Ventromedial Undercutting

—Especially, the Follow-up of Changes after the Operation—

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Twenty-four mental disorder patients, comprising 6 cases of schizophrenia, 3 cases of obsessive-compulsive neurosis, 2 cases of depression, a case of schizoaffective psychosis, a case of involutional melancholia and a case of epilepsy with explosive behavior, performed by the orbitoventromedial undercutting (HIROSE) were studied electroencephalographically before and after the operation.

In all cases EEGs were recorded in the waking and resting state. In addition, the responses to the hyperventilation and photic stimulation were applied.

These recordings were performed before the operation, and at the first, third,