24. Localized Ultrasonic Lesion of the Brain
(the IVth report)

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At 17th Japan Neurosurgical Meeting, we reported our study on the histological changes of subcortical tissue of animal brain, which was experimentally produced by focus ultrasound, using stereotaxic apparatus. At that time, concave lens of 5 cm in diameter and 10 cm in focal distance was used.

This time, we tried to produce lesions by lenses of 5 cm and 8 cm in diameter and 10 cm in focal distance, and investigated the differences of histological changes produced by lenses of different diameter as well as the histological changes of lesions produced by single and repeated irradiation of ultrasound. We found repeated irradiation made much more damage on blood vessels. Therefore, a single shot was preferable for production of localized brain lesion of less hemorrhagic change.

25. Special lecture "Radioisotope in the neurosurgical field"

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26. Experiences of the Stereotaxic Approach

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This is to introduce the authors' experiences in the stereotaxic approach to the cases suffering from intractable pain and involuntary movement.

1) Approach to nucl. ventro-oralis ant. of the thalamus (Hassler) combined with pallidum int. ant. for spastic choreo-athetosis.

2) Approach to nucl. ventro-oralis ant. of the thalamus (Hassler) for parkinsonian tremor.

3) Approach to nucl. ventro-caudalis parvocellularis int. of the thalamus (Hassler) for severe pain due to polyradiculoneuritis.