Each patient had an episode of high febrile disease 6 to 10 months before admission, which was treated for a short period of time with antibiotics.

Histological study reveals that one was of tuberculous arachnoiditis and the other of hyperplastic and hyalinized arachnoiditis with lymphocytic infiltration.

It should be emphasized that 1) antibiotic treatment of meningitis should be complete, 2) close observation of postmenigitic patient is important for possible development of reported complications, which necessitates neurosurgical intervention.

23. Conditions of Intensive Ultrasonic Irradiation and Localized Cerebral Lesions Produced by Focused Ultrasound

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For the neurosurgical application of high intensity focused ultrasound we need to know the exact volume of produced focal lesions and the degree of histological changes. This report is intending to answer the above question.

Practically, the focusing method of ultrasound by sound lenses seems to be more useful than that by metallic reflectors. Frequencies used in experiments of this report are 970 KC and 1460 KC. Lesions produced by 970 KC are about 3.2 times larger in volume than those by 1460 KC and lesions of these experiments are about half a time smaller than those theoretically estimated in water. During the course of repair of lesions there is scarcity of gliosis even after several weeks.

To make lesions larger than a single focus, irradiations of more than two shots were used. Consequently, if there is irregular overlapping of intensive sound fields some unexpected lesions will occur. But those lesions are very near to the exactly located focal lesions and are also inside the area formed by over three foci. This fact shows that the area of focal lesions can be controlled and is important for neurosonic surgery.