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OSSİFİED SUBDURAL HEMATOMA
A Case Report

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Summary: Ossified subdural hematoma is a rare condition. We report a case with ossified subdural hematoma who operated on in our clinic. The patient had epilepsy, headache and behavoiral problems. Following the operation though her complaint of headache was disappeared completely epilepsy and behavoiral problems were continuned unchanged.

Key words: Ossified hematoma, subdural hematoma.

The natural history of the blood in subdural space is a follows (7):
1. The blood may completely resorb with full expansion of the brain and failure of the devolepment of membranes.

2. The subdural clot may organize with a well formed membrane.
3. The blood clot may lyse and subsequently increase in size.
4. A subdural hematoma may rarely calcify with deposition of lime salt in the degenerating hematoma.
5. Actual ossification of subdural hematoma may develop.

The reason of why the blood in the subdural space is resorbed in some and calcified or ossified in others in not clear (1,7).

The Ossified subdural hematoma is a rare condition (1,11).

Goldhahn (5) reported the first succesful removal of one by operation which also demonstrated histologically. There are only sporadic reports of calcified or ossified subdural hematoma operated upon succesfully by authors (1,3,5,6,11).

The most frequent symptom of the ossified subdural hematoma is epilepsy exsisting for many years. The other less frequent symtoms are headache, hemiparesia or hemiplegia and behavoiral problem (3,7,8,10,11).

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It has been believed that the symtoms in the ossified subdural hematoma are dependent on the accompanying underlying brain damage rather than the calcified or ossified hematoma (8).

In this article, we present a case of ossified subdural hematoma with histologcally verified typical true bone.

Case Report

28 years old houswife was admitted to our clinic on 10.3.90. with epilepsy, headache and behavoiral problems. The patient had a skull trauma when she was 7 years old. At that time she was not render unconscious and had no problem until she was 12 years old. There after she developed generalized epilepsy could not be controlled by medication. Headache and behavoiral problems ensued during the last years.

Examination

The physical and neurological examination on admission were completely normal. There was no motor and sensory deficit and no abnormal reflex. She had behavoiral abnormalities such as memory distrubances and exciting.

X-Ray and CT of the skull showed plate calcification beneath the inner table on the right, extending from frontal to parietal region (Fig 1). There was no evidence of increased intracranial pressure.

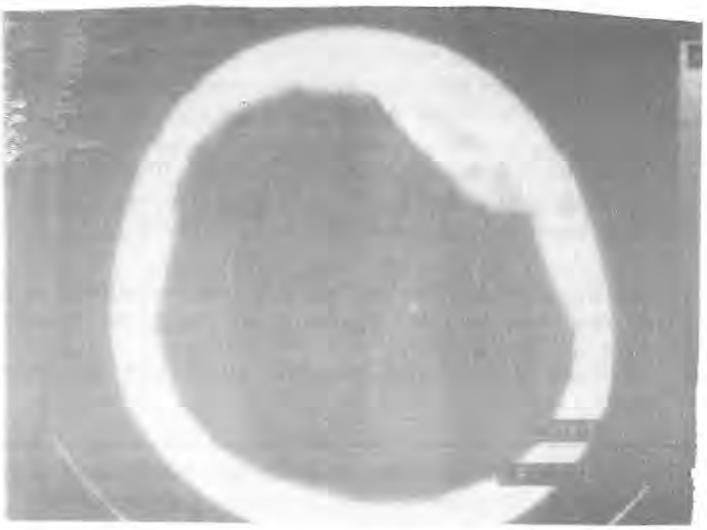


Fig.1. Preoperatif CT showing hyperdens mass on frontoparietal region.

Operation

On 20.3.90 under general anesthesia, an osteoplastic craniotomy was made in the right frontoparietal region. The dura mater appeared normal but there was a hard plate beneath which gave the impression of bone. The dura mater easily striped from the hard plate and the mass was freed of the thickened arachnoid and then removed.

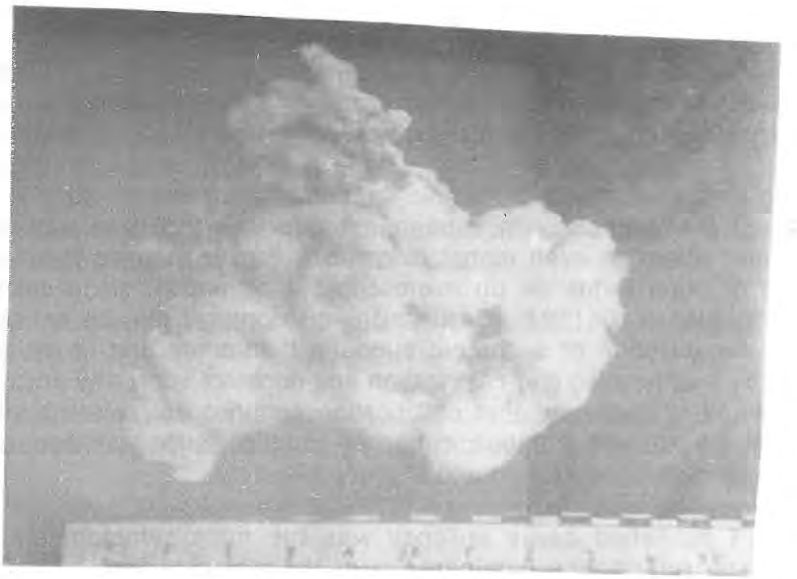
Course

On the examination 6 months later, the patiend was free of headache but epilepsy and behavoiral patient distrubances was still continuing.

Pathology

The specimen was 9x6 in diameter and grossly resembling bone. The convex surface was smooth. The concave side was irregular. (Fig 2)

On microscopic examination the specimen was found to be composed compact bone trabecular and bone marrow (Fig 3).



F ig.2. Photograph of specimen removed at operation.

Fig.3. Typical structure of bone and bone marrow.

Discussion

Encapsulation of subdural hematoma was first demonstrated by Putnam and Cushing (10).

Gardner (4) has demonstrated that the capsule of chronic subdural hematoma is semipermeable and the breakdown of the protein molecules within a subdural hematoma increase the osmotic tension in the membranes.

The following evoluative stage of chronic subdural hematoma consists in hyalinization in some areas of the capsule with subsequent deposition of lime salt. Some of these hematomas may attain an even more advanced stage, undergoing focal ossification. The term ossified or bone formation on microscopic examination, since calcification without ossification may also occur (3,10). Ossification when present may be considered a terminal phase in the organization of a chronic subdural hematoma and is usually preceded or accompanied by hyalinization and calcification and does not imply any unique factors (8). Body and Merrell (2) believed that calcification occured only after 3 years. They also concluded that an inherent metabolic tendency to calcification was necessary. The same views were supported in the Afra (1) and Munro's (9) article.

In the most of published cases epilepsy was the main symptom and least frequent symptoms were headache, hemiparesia or hemiplegia and behavioral problem (1,3,7,8,10,11).

Mc Laurin (8), in his review of the late results of calcified or ossified subdural hematomas that have been operated on by several others and himself, concluded that surgical theraphy is not benefical in preventing or improving the sympotms but some others announced that the symptoms could be recovered by surgical theraphy (1,6,7).

Mc Laurin (8) believes that the sympotms are dependent on the accompanying underlying brain damage rather than the calcified or ossified hematomas and that removal of such lesions is neither necessary nor benefical.

The results of surgery in these patients are difficult to interpret. Epilepsy which was the main complaint of our patient has remained unchanged. Therefore the advisability of the surgical procedure in such lesions is to be questioned.

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