POSTERİOR FOSSANIN KİST HİDATİĞİ: Vaka takdimi
Hydatid cyst of the posterior fossa: A case report

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Özet: İnfratentoryal yerleşimli nadir bir kist hidatik vakası sunulmuştur. Bu kistlerin sıklığı, teşhisi ve tedavisi tartışılmıştır.

Anahtar Kelimeler: Komputerize tomografi, Ekinokok, Kist hidatik

Summary: A rare case of an infratentorially placed hydatid cyst was presented. The frequency, symptoms, diagnosis, and treatment of these cysts are discussed.

Key Words: Computed tomography, Echinococcus, Hydatid cyst

Hydatid cyst of the posterior fossa is very rare. Recently, a new case of hytadid cyst in the posterior fossa was treated by the department of Neurosurgery, Faculty of Medicine, Kayseri. The diagnosis was based on computerized tomography findings. The patient did not have any evidence of hydatid disease elsewhere in the body. The delivery of the cyst resulted in a dramatic neurological recovery.This case is reported because of its unusual location.

CASE REPORT

This 47-year-old woman was admitted to our clinic on August 13, 1991. Her complaints were headache, nausea, vomiting, and disturbance of gait for about seven months. There had been no systemic infection or trauma. On examination, she appeared well and oriented. Her gait was ataxic and ataxia was more prominent on the right lower limb. She had evidence of cerebellar dysfunction on the right side. There was nystagmus in all directions of gaze. She had no other motor and sensory disturbances. Plain x-rays films of the skull were normal. A computed tomographic (CT) scan showed a cystic lesion with clearly defined border in the right cerebellar hemisphere (Fig 1). There was slight displacement of the 4 th ventricule to the opposite site.

The lesion contained a fluid with a Hounsfield unit value similar to that of cerebrospinal fluid (CSF). There was no enhancement after contrast injection. Casoni and Weinberg tests were negative. Plain xray films of the chest were normal. The size of the cyst was 26.7 mm in diameter in CT scan on July 3, 1991 (Fig 1). The cyst became 32.7 mm in diameter on August 14,1991 (Fig 2), when the patient was admitted for surgery. The average growt rate was calculated to be 5.2 cm / year.

On August 18, 1991 a right suboccipital craniectomy was performed. The vermis was deviated to the left and right cerebellar gyrus was flattened. A cortical incision was done. The cyst was encountered at a depth of approximately 15 mm By the method described by Arana-Iniguez(1,2), and a Dowling technique (3), saline was injected into the cyst-brain interface and a cyst measuring 3 cm across was delivered intact (Fig 3).

The postoperative course was uneventful and the patient showed marked recovery in her neurological status. The postoperative CT scan was normal (Fig 4). Detailed investigation failed to reveal any evidence of hydatid disease elsewhere in the body.

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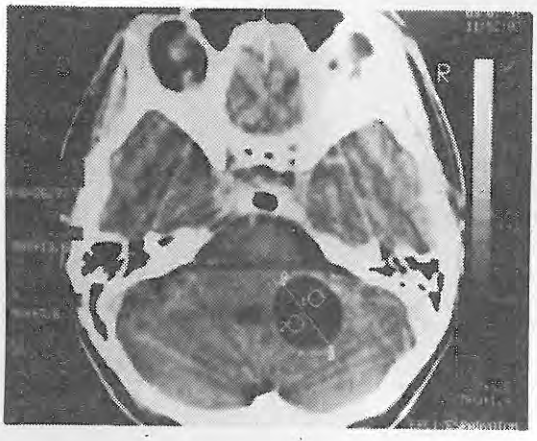

Figure 1. The first preoperative CT scan of the cerebellar hydatid cyst measuring 26.7 mm

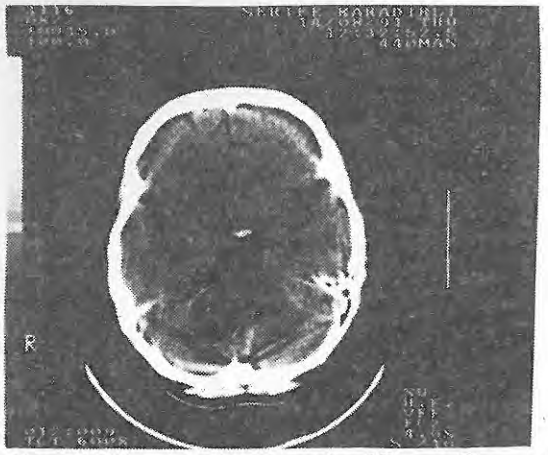

Figure 2. The second preoperative CT scan. The cyst diameter is 32.7 mm

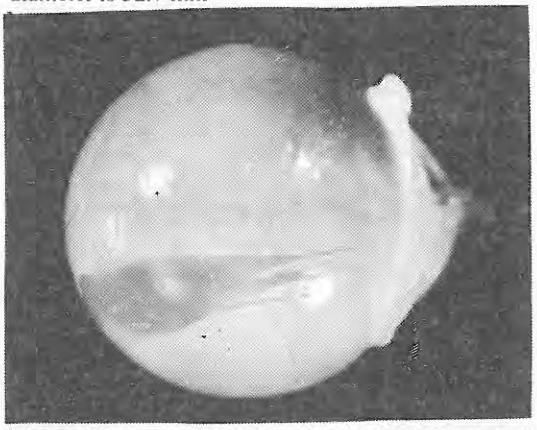

Figure 3. An unruptured cerebellar hydatid cyst after removal

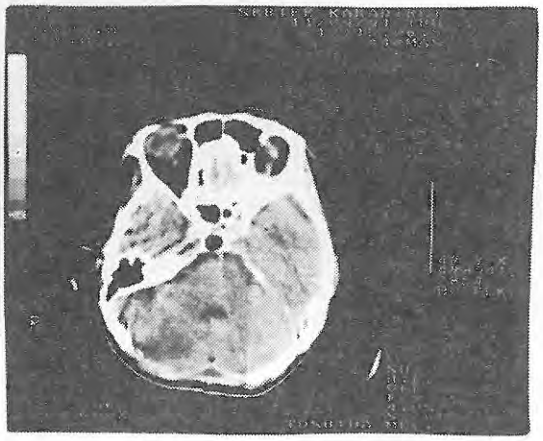

Figure 4. Postoperative CT scan showing normal cerebellar structure

DISCUSSION

The first case of hydatid cyst of the posterior fossa was reported by Maunsell in 1889 (4); and some authors think that this case was the first neurosurgical operation into the posterior fossa. Hydatid cyst of the posterior fossa is very rare. Despite increasing sanitary measures for the prevention of echinococcosis, hydatidosis still occurs in the six major continents, although its greatest incidence is recorded in South America, Europa, Australia,and South Africa. Children are often affected because of their close contact with dogs (2,5-8). The incidence of hydatidosis of the central nervous system is low , varying between 0.9 -2.1% of all hydatidosis cases (8,9). In Turkey, this rate was found to vary between 3.4 and 2.4 percent (10,11). Cerebral hydatid cysts are often very large, especially in children. They are tolerated for a long time, and are usually huge when diagnosed (1,3,12).

Although there is no spesific symptom or sign of hydatid cyst of the posterior fossa, according to Boixados (13), it is possible to distinguish three clinical form of hydatid cyst depending on location:

1. Intraparenchymal hydatidosis is produced by a single cyst located in the vermis or cerebellar hemisphere. There is marked intracranial

hypertension with dysmetria, and cerebellar signs.
2. Fourth ventricular hydatidosis causes obstructive hydrocephalus. Clinically, there are symptoms of increased intracranial pressure, hypotonus, nystagmus, and truncal ataxia.
3. Subarachhoid hydatidosis of the posterior fossa is characterized by multiple hydatid cyst in the sisterns of posterior fossa.There are symptoms and signs of increased intracranial pressure. Deficits of the 7 th, 8 th,9 th,11 th, and 12 th cranial nerves are common due to extension of hydatid cyst to the cerebellopontine angle.

Before the advent of CT scanning, vertebral angiography and ventriculography were the procedures of choice for the diagnosis of posterior fossa hydatid cyst. Neither ventriculography nor vertebral angiography could differentiate the hydatid cyst from a cerebellar mass. CT scanning, magnetic resonance imaging and ultrosonagraphy are all exellent studies that localize the lesions and may be used to predict the histological nature of the cyst structure (14,15). Nevertheless, the CT features described by the authors as pathognomic can also be seen in the presence of a large cysticercus vesicle (16).

Treatment consists of isolation of the patient from source of infestation and operative removal of symptomatic cyst. Radical removal were well established by Dowling and Orlando in 1929 (17). Great care must be taken to remove the cyst intact to avoid seeding tissue with viable hydatid larvae. Carrea et al (3), pointed out that the essential steps of the technique are: (a) forming a large flap; (b) careful handling during all of the operative steps, avoiding monopolar coagulation; (c) opening of the atrophic cortex overlying the cyst; and (d) easing the cyst out by lowering the head of the operating table and instilling warm saline between the cyst and the surrounding brain.

An average growth of one cm per year for intracranial hydatid cysts in the adult has been suggested (2,18,19), although this rate can be much faster in children (20,21). The growth rate in our adult case was more than five cm per year. We think that such extreme rapid growth of hydatid cysts must be considered and this aspect of the disease deserves detailed studies.

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