Extradural Hydatid Cyst of the Posterior Cranial Fossa

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Summary

Hydatid cyst of the posterior cranial fossa is rarely seen. We report the case of a 13-year-old girl with extradural hydatid cyst of the posterior cranial fossa presenting with the symptoms of high intracranial pressure. Diagnosis was made by radiological investigations and confirmed during surgery and by histological examination. Cranial hydatid cyst must be considered especially in children presenting with the symptoms of raised intracranial pressure and living in endemic areas.

Key words: Extradural, hydatid cyst, posterior fossa

Sir,

Cranial hydatid cysts are more common in children and occur more frequently in the supratentorial region. Hydatid cyst located in the posterior fossa extradurally is extremely rare, only six cases have been reported in the literature up to date(1).

A 13-year-old girl was admitted with a 15-day history of headache, nausea and vomiting. Physical and neurological examination was normal. Her past medical history revealed that she had been operated for liver hydatid cyst 2 years ago. Cranial computed tomography (CT) revealed a large cystic extra-axial mass lesion with internal septations in the right posterior fossa with obstructive hydrocephalus (Figure 1). There was not calcification or hemorrhage. Cranial magnetic resonance imaging (MRI) revealed a large cystic extradural lesion in the right posterior fossa that was hypointense on T1-weighted sequences, hyperintense on T2-weighted sequences with hypointense peripheral wall (Figure 2). There were obstructive hydrocephalus due to compression of 4th ventricle and cerebellar herniation (Figure 2, 3). There were multiple cysts in the right

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Özet


Anahtar Kelimeler: Arka çukur, ekstradural, hidatik kist
posterior fossa (Figure 2). There was no contrast enhancement on cyst wall and septa (Figure 2, 3). Contrast CT of the chest and abdomen did not reveal any hydatid cysts.

The patient underwent suboccipital craniotomy and cysts were removed using Dowling’s technique. The diagnosis was confirmed during surgery and by histological examination of a tissue sample from the cyst (Figure 4). The patient was treated with the antihelmintic agent albendazole in combination with antibiotics. The post-operative course was uneventful and the patient was discharged after 1 week.

Figure 1: Axial computed tomography image shows transependymal spread of cerebrospinal fluid (white arrows) due to hydatid cyst (asterisk).

Figure 2: A. Sagittal T2-weighted image shows hypointense wall and septa (black arrows), multiple cysts (white arrow) and large cyst (asterisk) in right posterior fossa. B. Sagittal contrast enhanced T1-weighted image shows no contrast enhancement on cyst wall and septa and multiple cysts (white arrow) and large cyst (asterisk) in right posterior fossa.
Figure 3: A. Axial FLAIR image shows transependimal cerebrospinal fluid migration (white arrows) due to compression of 4th ventricle (black arrow) by hydatid cyst (asterisk).
B. Axial contrast enhanced T1-weighted image shows transependymal spread of cerebrospinal fluid (white arrows) due to compression of 4th ventricle (black arrow) by hydatid cyst (asterisk).
C. Axial FLAIR image shows transependymal spread of cerebrospinal fluid (white arrows).
D. Sagittal contrast enhanced T1-weighted image shows cerebellar tonsillar herniation (curved arrow) due to hydatid cyst (asterisk).

Figure 4: A. Intraoperative view after right suboccipital craniotomy (cw: cyst wall).
B. Removal of the large cyst using Dowling's technique (fc: Foley's catheter, hc: hydatid cyst).
C. Intraoperative view after complete removal of the cysts (d: dura mater, es: extradural space).
D. Macroscopic view of the cyst.
E. Histologic view of the cyst, showing its hyaline laminated wall and germinative layer with scolices (hematoxylin-eosin, original magnification \( \times 100 \)), (gm: germinal membrane, lm: laminated membrane, s: scolices).