Cerebral echinococcosis

- Application of 11C-CHO in the imaging of cerebral alveolar echinococcosis: A prospective study
- Hydatidosis with Atypical Localization: Report of Three Cases and Literature Review
- Hepatic alveolar echinococcosis with chest wall metastasis: a case report
- Impact of Multimodal Fast-Track Protocols on Recovery in End-Stage Hepatic Alveolar Echinococcosis Patients Undergoing ex vivo Liver Resection and Autotransplantation: a Preliminary Study
- Primary cerebral hydatid cyst in a pregnant woman: A case report
- Ex vivo Liver Autotransplantation for Alveolar Echinococcosis with Brain and Lung Metastases: A Case Report
- Multiple Giant Cerebral Hydatid Cysts in Pediatrics
- Cranial Dura Breach by Extradural Skull Base Hydatid Cyst Leading to Intraventricular Spread: A Novel Case of Intraventricular Spread

Cerebral echinococcosis is very rare, representing 2% of all cystic echinococcosis (CE) cases. Primary echinococcal cysts of the brain are extremely rare in pediatric patients.

As cerebral CE cases are rare, there are few reports with molecular confirmation of the causative species.

A study reports mitochondrial gene analysis from 4 Mongolian pediatric cerebral CE cases. Molecular confirmation was obtained for 3 of the 4 cases, with all 3 cases determined to be due to Echinococcus canadensis (G6/G7) infection. None of the cases had other organ involvement. This is only the third report on the molecular identification of the Echinococcus species responsible for cerebral CE, and only the second report of E. canadensis (G6/G7) being the causative agent of cerebral CE [1].

Case reports

Akrim et al. report the case of a 22-year-old woman with recurrent multiple cerebral hydatid disease occurring seven years after resection of a primary cyst. She was admitted due to high intracranial pressure and generalized seizures. A brain CT scan showed several intracranial multivesicular cysts in the left parieto-occipital region with localized calcifications. According to the radiological results and patient story, the diagnosis of cerebral echinococcosis was presumed. The patient underwent complete excision of the cysts followed by medical therapy. The parasitological and histological examination of the surgical specimen confirmed the diagnosis. The transient neurological deficit was the only postoperative complication that improved, thanks to reeducation in the early phase. The patient was discharged in good condition with no other complications at the follow-up [2]

2017

Surgical Planning for the Treatment of a Patient with Multiple, Secondary, Intracranial Echinococcal Cysts [3]. Fatal Liver and Lung Alveolar Echinococcosis with Newly Developed Neurologic Symptoms due to the Brain Involvement [4].

2016

The fox tapeworm Echinococcus multilocularis causes human alveolar echinococcosis, commonly affecting the liver. However, in ~1% of cases, systematic spread of the disease involves the brain as well. A patient had a 6-year history of liver and lung alveolar echinococcosis that was considered not suitable for surgery, and treatment with albendazole was introduced. After the appearance of neurologic disturbances, an intracranial mass lesion was demonstrated by radiologic imaging. The lesion was surgically removed, and histologic analysis revealed metacestode tissue of E. multilocularis . Despite the surgical resection of the lesion, the patient died of progression of systemic alveolar echinococcosis. The authors highly recommend implementing neurologic monitoring to the follow-up algorithm for patients with systemically disseminated alveolar echinococcosis. When neurologic symptoms occur, radiologic imaging of the brain should be obtained immediately. Surgery should be considered for all intracranial echinococcal lesions, unless the lesion is located in the eloquent brain area [5)].

2014

A 16-year-old boy referred to a tertiary center with intractable epilepsy for the previous three years despite receiving full doses of three antiepileptic drugs. Brain computed tomography (CT) showed a left frontal calcified mass. Magnetic resonance imaging (MRI) of the brain revealed a well-defined spherical mass in the left frontal lobe, slightly hypointense on T1-weighted and heterogeneous hyperintense on T2-weighted images with no contrast enhancement. With a broad differential list in mind, a surgical intervention was planned. During surgery, a primary calcified cerebral echinococcal cyst with severe adhesion to the adjacent dura of the frontal region was discovered and removed intact. Histopathology examination confirmed the diagnosis. Only phenobarbital was continued and no medical therapy for CE was administered. Two years after surgery, the patient remained free of seizures. In areas endemic for CE, cerebral echinococcal cyst should be included in the differential list of patients with intractable seizures. Though rare, this entity can present itself as a calcified mass on neuroimaging. Surgical removal of the calcified cyst is necessary for control and treatment of the epilepsy [6)].

1)
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