Posterior Fossa Epidural Hydatid Cyst in the Adult

Burak Kazanci, Ahmet Soyer,* and Ayhan Comert†*

Abstract: Hydatid cyst is an important parasitic disease especially in endemic regions. Hydatid cysts are most commonly found in the liver and lungs and only 1% to 2% of the cysts reach the brain. Intracranial hydatid cysts are usually supratentorial and majority of cases are children and young adults. In this case report, a 55-year-old woman who lives in rural area in Turkey, admitted to our clinic with severe headache, neck pain, gait disturbance, and vomiting. Her neurological examination revealed cerebellar ataxia and left dysmetria. Radiological findings were compatible with hydatid cyst. On the 3rd of antihelmintic therapy, the patient underwent suboccipital craniotomy and epidural cyst was excised using Dowling technique without rupture of the cyst wall. Patient's symptoms improved postoperatively. Although hydatid cyst in posterior fossa is a very rare entity, it should be kept in mind in patients with intracranial cystic lesions who live in endemic regions.

Key Words: Dowling technique, elevated intracranial pressure, epidural hydatid cyst, posterior fossa

Hydatid cyst (cystic echinococcosis) is a parasitic disease caused by tapeworms of the Echinococcus granulosus. Humans are intermediate hosts for tapeworms which transmitted by canines. The disease is endemic in Middle-East, Mediterranean region, Latin America, Southern Asia, and Australia so disease has worldwide importance. Intracranial hydatid cyst is rare (%1–2 of intracranial mass lesions) and most of their location are supratentorial.[1,2] Posterior fossa is a very rare location for hydatid cyst.[3,4]

In this case report, we present a 55-year old woman with posterior fossa hydatid cyst.

CLINICAL PRESENTATION

A 55-year-old woman who was living in rural region in Central Anatolia, Turkey, was admitted to our clinic with complaints of severe headache, neck pain, gait disturbance and vomiting. Complete blood counting and biochemical parameters was in normal range. Neurological examination revealed that cerebellar ataxia and left dysmetria. Cranial MRI showed that a well-defined, spherical, nonenhancing cystic lesion in left cerebellar hemisphere and the fourth ventricle was displaced. Lesion was hypointense in T1W images and hyperintense in T2W images (Fig. 1). Chest radiograph and hepatic ultrasonography were normal. Albendazol treatment (15 mg/kg dose b.i.d) was started because of radiological findings were compatible with hydatid cyst. On the 3rd day of antihelmintic therapy, the patient underwent left lateral suboccipital craniotomy and epidural cyst was totally excised using Dowling technique. After excision without rupturing, the cavity was irrigated with hypertonic saline. Patient's symptoms ameliorate postoperatively and the patient was discharged after 6 days. Histopathology confirmed the hydatid cyst diagnosis. Albendazol was prescribed for 3 months and postoperative course was uneventful.

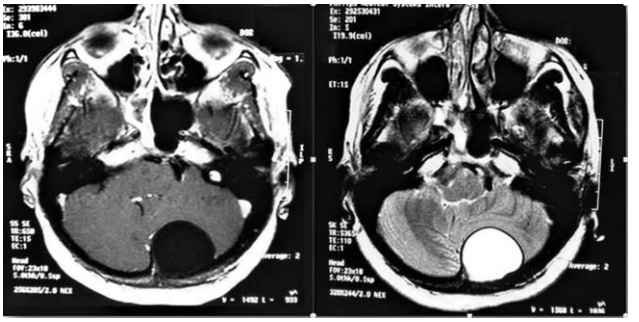

FIGURE 1. Cranial magnetic resonance imaging showing a well-defined, spherical, nonenhancing cystic lesion (hypointense in T1W image and hyperintense in T2W image) in left cerebellar hemisphere. Fourth ventricle was displaced.

DISCUSSION

Hydatid cyst is caused by the tapeworms of Echinococcus and humans are inadvertent intermediate host for tapeworms. Humans acquire echinococcosis by ingesting viable parasite eggs which are distributed via local environment contamination by the feces of tapeworm-infected canines (especially domestic dogs in livestock-raising areas).[5]

Hytadid cysts are most commonly found in the liver and lungs and only 1% to 2% of them can reach the brain. Intracranial hydatid cysts are most frequently supratentorial (50%–75%) and especially affects the parietal lobe.[3,5,6] Majority of cases are children and young adults.[7,8]

Signs and symptoms of the disease depend on location. The most common clinical signs and symptoms are headache, papilledema, vomiting, extremity weakness, and facial nerve dysfunction.[8] The growth rate of hytadid cyst has been reported between 1 and 5 cm/ year to 10 cm/ year.[9]

Computed tomography (CT) and magnetic resonance (MR) scans are main diagnostic tools for intracranial hydatid cyst. CT scans reveal a hypodense well-defined spherical lesions. MR scans reveal well-bounded spherical, nonenhancing intra-axial cystic lesion and cyst fluid is isointense with cerebrospinal fluid in both T1- and T2-weighted images.[8] Perilesional edema and rim enhancement show the hydatid cyst was infected.[10]

Surgery has traditionally been the principal definitive method of treatment. Mebendazole and albendazole are antihelmintics effective against cystic echinococcosis and can be used before and after surgery. Although there are several techniques for cyst excision, Downing technique is very applicable and the most used.[2] Cyst rupture is associated with poor outcome so extirpation without rupture is very important.[6,8] Infected cysts are so adherent to the surrounding cerebral tissue that it is almost impossible to excise them without cyst wall rupture. In this situation antihelmintic therapy must be given pre and postoperatively.

In conclusion, hydatid cyst is an important parasitic disease especially in endemic regions. Although epidural hydatid cyst in posterior fossa is very rare entity, it should be taken into account in patients with intracranial cystic lesions who live in endemic

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regions. Dowling technique is useful for cyst excision. Careful dissection without rupturing the cyst wall is very important factor for prognosis.

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Paget Schroetter Syndrome and Chylothorax After Rhinoplasty

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Abstract: Paget-Schroetter syndrome is a rare clinical condition characterized by subclavian vein thrombosis following repetitive upper extremity effort. In this case, we presented a 35-year-old female patient who underwent septorhinoplasty in our clinic. A swelling of the left part of the neck extending to the clavicle was detected 4 hours after the operation. Computed tomography of the thorax revealed a pleural effusion at the base of the left lung and a computed tomography angiogram demonstrated a recanalized left subclavian vein thrombosis. History of the patient clarified that she had moved to another house and had lifted heavy furnitures 4 days before the surgery. The patient was diagnosed with Paget Schroetter syndrome followed by chylothorax. Paget-Schroetter syndrome followed by chylothorax could be presented after a surgical intervention of the head and neck. Early diagnosis is essential to reduce the risk of ongoing morbidity and mortality.

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Key Words: Chylothorax, complication, nasal surgery, paget-schroetter syndrome, rhinoplasty, subclavian vein thrombosis

Paget-Schroetter syndrome, also known as effort thrombosis, is a rare disease which is generally associated with repetitive upper extremity effort.[1] Regarding the development of subclavian vein thrombosis, this clinical issue could be followed by a chylothorax. Thrombosis relies on endothelial damage which can also be triggered by surgery, including head and neck. An otolaryngologist should be aware of the symptoms and manifestations of this rare disease to avoid any further explorative surgical intervention with the suspicion of a hematoma or an abscess formation due to the primary surgery. In this report, we present a case of Paget-Schroetter Syndrome followed by chylothorax which has developed after rhinoplasty.

CASE PRESENTATION

A 35 years' old female patient was admitted to our clinic with nasal obstruction and nasal deformity. On physical examination, she had a moderate septal deviation with bilateral inferior conchae hypertrophy and a prominent dorsal hump. She underwent a septorhinoplasty operation under general anesthesia without any perioperative complication. Four hours after the surgery, she had a swelling on the left side of her neck, extending to the clavicle, without any pain and tenderness (Fig. 1). She could easily rotate her neck and no limitation was detected. Ultrasonography of the neck demonstrated a diffuse subcutaneous edema and this finding was not consistent with any hematoma or abscess formation. Computed tomography (CT) of the neck revealed a heterogenious imaging extending from the subcutaneous tissue of the neck through the mediastinum. On the next day, the patient complaint of a mild dyspnea and swelling of the left arm. Further investigation was performed regarding esophageal perforation and oncoming mediastinitis. Chest x-ray, thorax CT, CT-angiography, and esophagogram were performed, respectively. Pleural effusion was demonstrated on chest x-ray as a blunting of the left costophrenic angle. Thorax CT confirmed the pleural effusion which was located on the base of the lung without a mediastinal involvement. CT angiography demonstrated a recanalized left subclavian vein thrombosis. Esophagography was totally normal and no leak of contrast was observed. Vital signs of the patient were in normal range throughout the process. Under these circumstances, perforation of the esophagus and mediastinitis were excluded. Further questioning of the patient revealed a history of lifting of heavy furnitures just a few days before the surgery. Differential diagnosis included Paget-Schroetter Syndrome accompanied by chylothorax and the patient was consulted to the department of thoracic surgery. Diagnostic thoracentesis was performed on bedside, and triglyceride level of