
A rare presentation of hydatid cyst in a child

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ÖZET

Çocuktaki nadir bir kist hidatik prezentasyonu

Kist hidatik dünyadaki en yaygın ve en ciddi sestod infeksiyonudur. Hidatik hastalığın en sık etkilediği organ karaciğer olup, bunu akciğerler izler. Olguların %5-13'ünde her iki organ da birlikte etkilenir. Böbrek tutulumu nadiren bildirilmiştir. Burada akciğer ve böbrekte hidatik kisti olan ve cerrahinin her iki organda da etkili olduğu bir olguyu sunduk. Bu olgunun nadir olmasının sebebi, karaciğer tutulmaksızın ender bir birliktelik gösterdiği bu organlarda kist gelişiminin görülmesidir.

Anahtar Kelimeler: Hidatik kist, çocuk, akciğer.

SUMMARY

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Cyst hydatid is the most widespread, serious cestode infection in the world. The most common organ affected by hydatid disease is the liver followed by the lungs and the two organs are affected simultaneously in about 5-13% of cases. The involvement of kidneys are rarely reported. Here we reported a patient with hydatid cysts in lung and kidney which the surgery was effective for both organs. The rarity of this case is the unusual combination of the cyst development in these organs without the involvement of liver.

Key Words: Hydatid cyst, child, lung.

Hydatid disease is an important health problem worldwide, especially in endemic regions like the Mediterranean countries (1). It is a parasitosis caused by *Echinococcus granulosus* (2). Incidental human infestation with larval form results in formation of hydatid cysts in various parts of the body, the liver being the most common site (3). Peritoneal cavity, spleen, kidney, spinal column, retroperitoneal space, abdominal wall, myocardium and the thoracic wall are unusually involved (4). In children there is a predominance of lungs over hepatic cysts with renal echinococcosis being very rare in childhood (2,5). The rarity of this case is the unusual combination of the cyst development in lung and kidney without the involvement of the liver.

CASE REPORT

A four-year old girl admitted to a medical center with the complaints of vomiting and coughing accompanied with respiratory distress. After a cystic lesion in the right-medium lobe of the lung had been visualised in the chest roentgenogram and a well defined round cyst with 10 x 10 cm dimension probably in the right hepatic lobe by ultrasonographic evaluation had been seen, serologic tests were performed. Enzyme linked immunosorbent assay (ELISA), indirect fluorescent antibody test (IFAT) and immune hemagglutination (IHA) were found positive in the titers of 1/40.000, 1/640, 1/40.000 respectively. Pulmonary cyst was resected completely and four days later after the operation she admitted to our hospital with respiratory distress and vomiting with a clear and watery content. Her physical examination revealed tachypnea, intercostal retractions, diminished breath sounds on the right hemithorax, palpable mass in the abdomen extending to right inguinal region from the right

subcostal area. Chest X-ray disclosed two cystic lesions filled by air in the medium and lower lobes of the right lung (Figure 1). Thorax computerized tomography (CT) confirmed two cystic lesions including air in the medium and the lower lobe of the right lung with the dimensions of 7 x 6 x 7 cm and 7 x 6 x 5 cm, respectively (Figure 2). CT of the abdomen demonstrated unilocular cystic lesion taking origin from the right kidney with 10 x 9 x 11 cm dimensions (Figure 3). No cysts were detected in the cranial CT and echocardiography. Under the lights of these findings, the pulmonary cysts placed in the right lung were excised and the bronchial openings in connection with the previously operated cyst were repaired. Also the cystic lesion in the right kidney was removed with its germinative membrane, its connections with the renal pelvis and calyceal system were repaired and a double J



Figure 1. Cystic lesions in the chest X-ray.

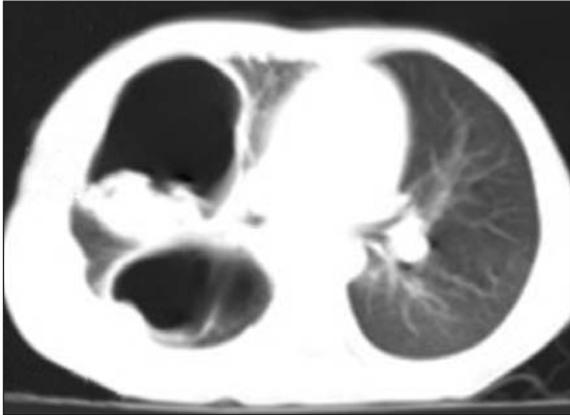


Figure 2. Computerized tomography of thorax.



Figure 3. Unilocular cystic lesion in the right kidney (computerized tomography of the abdomen).

catheter was placed. Albendazole therapy which was started in preoperative period, continued for three months after the surgery.

DISCUSSION

Turkey is an endemic country for hydatid disease (6). The disease is usually asymptomatic, symptoms may occur with the rupture, infection and compression of the cysts. Abdominal and chest pain, coughing, expectoration of the cyst, respiratory distress, anaphylaxis, jaundice, fever, headache and neurological signs may occur related with the localization of the cysts (7). Our patient presented with coughing, vomiting with a watery content and respiratory distress owing to the rupture of the pulmonary cyst. Even though the renal cyst had large dimensions, it did not cause any symptoms.

Hydatid disease can be diagnosed easily in many cases by considering the geographic region and with the help of the serologic and radiographic findings. ELISA and IHA are the most common serologic tests performed for the diagnosis. Positive serologic tests occur in 90% of the cases with hepatic cysts but occur only in the half of the cases with pulmonary cysts. Negative serology does not exclude the diagnosis. Radiographic methods are the most valuable diagnostic tests (8). In our patient both serologic tests and radiographic images confirmed the diagnosis.

In childhood renal hydatid cysts are extremely rare. As it was previously reported, renal hydatid cysts were seen in only 2-4% percent of the patients with the involvement of other organs particularly the liver (9). Yilmaz, et al. reported the urogenital system involvement rate as 2.15% in 372 hydatid disease cases (10). The interesting point of our case is the presence of renal and pulmonary cysts in the absence of hepatic involvement.

The primary treatment for hydatid disease is still the surgical excision of the cysts. Detailed examination of thorax and abdomen must be done by CT before the surgery. Turkyilmaz, et al. analyzed fifteen years of surgical assessment in 42 pediatric patients with pulmonary and abdominal hydatid cysts. They suggest that highly successful results can be achieved using conservative surgical approaches, such as cystotomy plus capitonnage for lung cysts and partial pericystectomy with capitonnage, omentoplasty, or both for liver cysts (11). Medical treatment with benzimidazole group drugs such as albendazole and mebendazole is necessary in disseminated disease, in patients for whom surgical processes have high risk and if cystic fluid is disseminated in the operation (12). Kaya Z, et al. reported a 4-year-old girl with disseminated cystic echinococcosis in the lung and the liver and a solitary cyst in the left kidney. Mebendazole therapy produced complete resolution of the lung and kidney cysts (13). Medical treatment is also recommended in pre and post operative periods. In our case, we started albendazole therapy in preoperative period and continued for three months after the surgery.

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