Primary Hepatic Cystic Carcinoid Tumor Mimicking Hydatid Cyst

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BRIEF HISTORY

A 47-year-old woman with a three-month history of abdominal pain and feeling of an abdominal mass was referred to our clinic. Physical examination revealed hepatomegaly and a mass from right upper quadrant to epigastrium. On laboratory examinations, she had anemia (hemoglobin: 8.5; MCV: 78 fl) with normal liver function tests. She was negative for hepatitis B surface antigen (HBsAg), hepatitis B e-antigen (HBeAg) and anti-HCV. Immunodiagnostic tests for ecchinococcal antibody were also negative. Her alpha fetoprotein (AFP) and carbohydrate embryonic antigen (CEA) were also negative.

Abdominal ultrasound demonstrated three hepatic echogenic cystic masses, measuring 20×14 cm in size. Abdominal CT-scan revealed three masses with peripheral enhancing (Figure 1) and other abdominal organs were normal (Figure 1).

With these imaging findings, patient was provisionally diagnosed with hydatid cyst of liver. After walling of cysts with wet saline hypertonic sponge, the big cyst first aspirated a dark fluid. After collapse of cyst, pricyst was hypervascular. The other cysts were evacuated, respectively. Three pricysts and solid component of them were resected with difficulty and bleeding. Three units of blood were transfused intraoperatively.

Macroscopically, specimen consisted of several fragments of creamy, cystic tissue measuring 10×10 cm and thickness of the wall was 0.3 to 0.4 cm. Microscopically, the cystic lesion was made of small and uniform cells with central nuclei and a moderated amount of finely granular cytoplasm. Cells were arranged in the combination forms of trabeculae, ribbons and glands with compact nest separated by a delicate fibrovascular stroma.

Immunohistochemical (IHC) stain was positive for neuron-specific enolase (NSE), synaptophysin, and also strongly positive for chromogranin (Figure 2d).

These evidences were compatible with a cystic carcinoid tumor of liver (Figure 2). Upper and lower gastrointestinal endoscopy, a small bowel series, abdominal US, and chest and abdominal CT scans were unremarkable.

DISCUSSION

Carcinoid tumors represent a group of well-diffe-

Figure 1: CT scan of abdomen with IV and oral contrast revealed three cystic lesions in the right lobe of the liver (b) and no other abdominal mass (a)

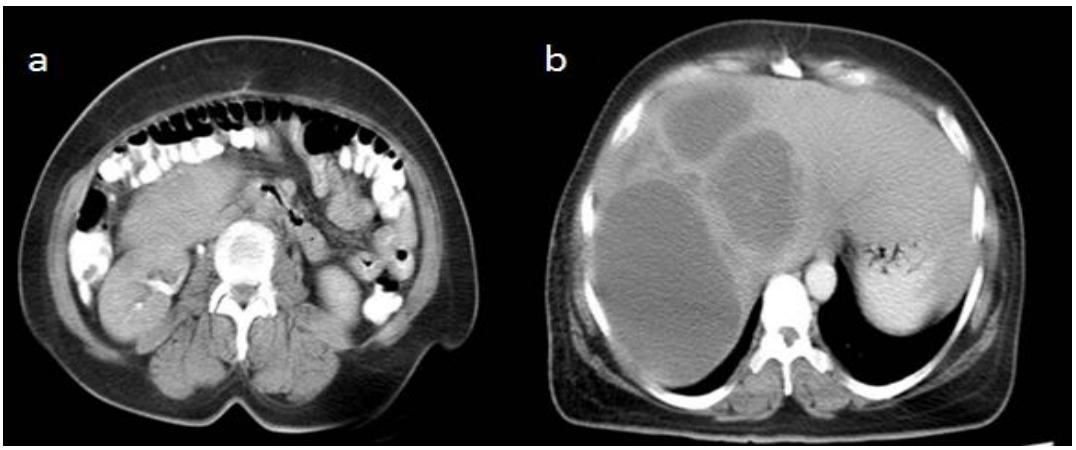
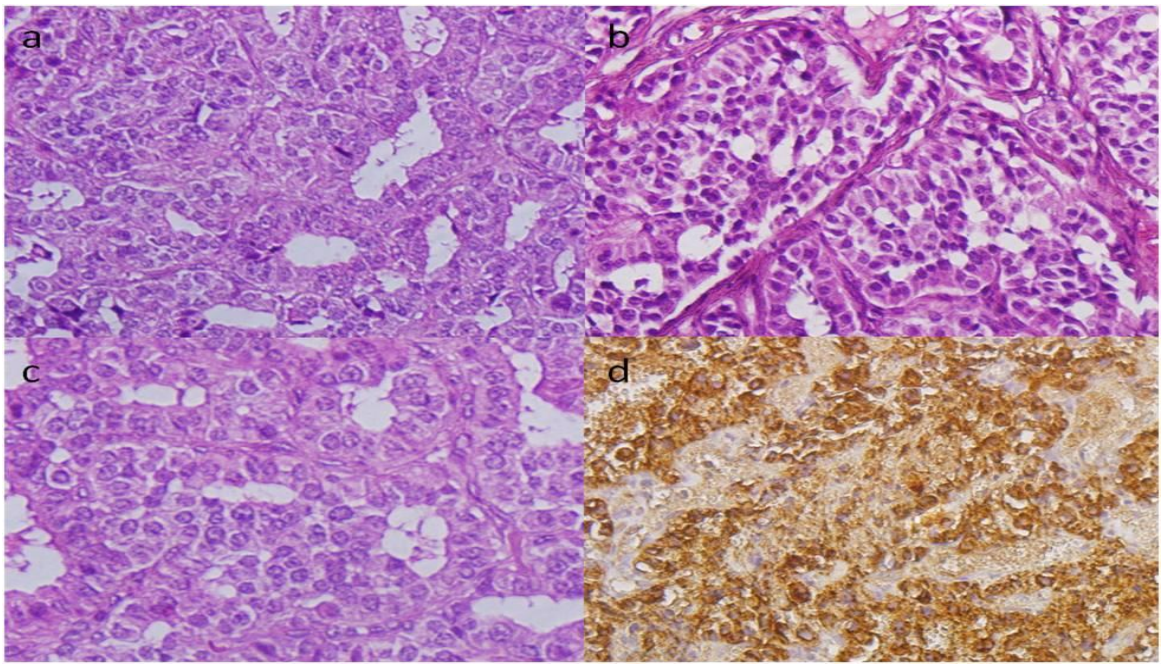


Figure 2: Carcinoid tumor, H&E stain showed glands, trabecula and small solid nests of medium-sized polygonal cells with rather uniform nuclei and eosinophilic granular cytoplasm (a-c). IHC stain showed the tumor cells with positive reaction to chromogranin (d).



rentiated tumors originating from the diffuse endocrine system outside the pancreas and thyroid. Primary hepatic carcinoid tumor (PHCT) is a very rare tumor, and presents as a cystic lesion. OCHT is extremely rare and so far only one case with this presentation has been reported [1-2]. Moreover these cystic lesions have wide differential diagnosis, including abscesses, hydatidosis, polycystic liver disease and tumors with cystic presentation, particularly in endemic area for hydatid disease [3-4]. It is for this reason that diagnosis of PHCT with this presentation is challenging for clinicians before pathological examination [3].

Solid and hypervascular lesions are typical findings in hepatic carcinoid metastases. On literature review, we found a report of hepatic cystic carcinoid tumor with three metastatic cases. Two of the three cases had extra hepatic origins and other had unknown origin [5]. Literature review also found a carcinoid tumor of the extrahepaticbilliary tree that led to the obstruction of bile duct [6].

Diagnosis can be made on ultrasound and CT findings [7]. As our patient was from an endemic area for hydatid cysts, the cysts found on US and CT were thought to be hydatid cyst of the liver.

Some cystic tumors of liver mimic the imaging appearances of the hydatid cyst [7]. Shetty et al [8] reported a primary neuroendocrine tumor in liver with imaging studies suggestive of hydatid cysts. US and CT-guided tru-cut orneedle biopsy to these cystic like masses are not performed for diagnosis routinely [7].

The choice treatment for cystic carcinoid tumor of liver is radical surgery [2, 7]. Our case underwent surgery without complications. Recently, at five month follow-up, she continues to do well. In conclusion, primary cystic carcinoid tumor of liver is a rare entity and these types of cysts should be considered in the differential diagnosis of hydatid cyst of the liver.

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