Case Report

A rare case of solitary hydatid cyst of kidney with renal pelvis involvement

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Abstract

Hydatid involvement of the kidney accounts for only 2–4% of all cases of hydatid disease it is very rare and again primary involvement of the kidney without involvement of liver parenchyma or lung parenchyma that makes it extremely rare. The purpose of this article is to review the imaging features of hydatid disease of the kidney and thus show the role of radiography, excretory urography, sonography, CT, and MRI in the diagnosis of Hydatidosis. Hydatiduria accompanies only 10 to 20 % of all cases of renal Hydatidosis and usually microscopic ,here we are reporting a 65 years old female with abdominal lump in right hypochondriac region with pain on USG finding suggestive of hydatid cyst of liver with indentation and possible involving right kidney but MDCT suggest it is a primary right renal hydatid large exophytic cyst having multiple daughter cysts involving upper pole of kidney with breech in the cortex and it extends to involve right renal pelvis which indenting to inferior surface of liver.

Key words

Renal hydatid cyst, Hydatidosis, MDCT.

Introduction

Hydatid involvement of the kidney is very rare accounts for only 2-4 % of all cases of hydatid disease and with extension in to renal pelvis makes it unique [1, 2]. This article reviews the imaging features of renal Hydatidosis.

Hydatid disease is mainly caused by Echinococcus granulosus, and it is endemic in many parts of the world. It spreads when patients ingest food contaminated by the eggs of the parasite; the embryos of parasite become lodged in several organs, including the kidney. During

their growth period the formation of germinal and laminated membranes causes the production of hydatid fluid, which is on later stages replaced with organized or calcified membranes [1].

Case report

We have reported here a symptomatic 65 year old female patient with abdominal palpable mass with abdominal distension and pain on USG finding raised possibility of hydatid cyst of liver with indentation and possible involving right kidney but MDCT suggested it was a primary right renal large exophytic cyst having multiple daughter cysts and calcified wall and did not show significant post contrast enhancement involving upper pole of kidney (**Figure – 1, 2**). It causes breech in the cortex and it extended to involve right renal pelvis which indenting to inferior surface of liver. Patient underwent for partial nephrectomy and resected specimen showed bag of cysts and it was confirmed by histopathology report.

Figure – 1: There is large exophytic cystic lesion with daughter cysts within involving upper pole of kidney with involvement of renal pelvis.

Discussion

Typical CT findings for renal Hydatidosis is necessary to differentiate it from other pathology include a cyst with a thick or calcified wall, a unilocular cyst with a detached membrane or multi-loculated cyst with mixed internal density and daughter cysts with lower density than the maternal matrix [4, 6]. The fluid within type I hydatid cysts has a low attenuation. The cyst wall in type I hydatid cysts is better delineated with contrast-enhanced CT compared with sonography [5]. The presence of daughter cysts on CT helps to differentiate type III hydatid cysts from renal abscesses. A zone of decreased contrast enhancement surrounding an early abscess, which represents infected but non necrotic renal parenchyma, appears hyper dense on delayed CT scan. Thickening of Gerota'fascia and perirenal fat stranding fat favored the diagnosis of an abscess. CT also plays role in the diagnosis of type IV hydatid cysts, which show an appearance similar to pseudotumor [3]. Ring like calcifications in the wall of type V hydatid cysts can be shown [4, 6]. It also shows other organ involvement.

Figure – 2: Large cyst with calcified wall and daughter cyst with low fluid attenuation as compare to mother cyst fluid and involvement of upper pole.

The radiologist's familiarity with the imaging findings of the disease is very important for early diagnosis and more appropriate treatment.

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