

Intraluminal Calcified Colonic Hydatid Cyst

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Citation

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Abstract

Hydatid cyst can occur anywhere from the big toe to the crown of the head as reported by Teymoorian & Bagheri in 1976. It is well documented in medical literature that renal hydatid cysts can be excreted out with urine (Hydatiduria) and pulmonary can be coughed out. Therefore, a hydatid cyst in the colon may theoretically dispatch and pass out with the stool. We have reported previously the first case of hydatid cyst in the sigmoid colon and we report herein the second case of intraluminal colonic calcified hydatid cyst in a 64-year-old male which discovered incidently during the evaluation of liver hydatidosis.

CASE REPORT

A 64-year-old male presented with left hypochondrial pain and bouts of diarrhea. On Plain X-ray of the abdomen, about 4 cm rounded structure with translucent core and calcified wall located in relation to an air filled bowel (transverse colon) close to the first lumbar vertebra, in the left upper quadrant was visualized [Fig. 1]. Ultrasound examination showed 4x5 cm., oval, unilocular echinococcus cyst with positive double wall-sign [Fig. 2], lodged in segment VIII of the right lobe of the liver while the calcified left hypochondrial entity was not related to any organ. Based on these imaging profiles, the diagnosis of hydatid cysts of the liver and the colon was established. Albendazole therapy was therefore initiated. Four weeks following therapy, the calcified mass has moved down to the pelvic region as shown on control plain x-ray of the abdomen [Fig. 3]. Six days later, the patient claimed that he had passed a small stony hard ball-like structure with stool [Fig. 4].

Figure 1

Figure 1: Plain X - ray abdomen showing a rounded structure (arrow Head) with translucent core and calcified wall located on the left side close to the first lumbar vertebra.



Figure 2

Figure 2: Ultrasound examination showing double wall sign in a hepatic hydatid cyst, the double wall layering is less obvious deeply (arrows). Hyd. C = Hydatid cyst.



Figure 3

Figure 3: Four weeks following therapy, the calcified mass has moved down to the pelvic region as shown on control plain x-ray of the abdomen.



Figure 4

Figure 4: Six days later, the patient claimed that he had passed a small stony hard ball-like structure with stool.



Control plain x-ray abdomen showed that the calcified structure has disappeared completely [Fig. 5].

Figure 5

Figure 5: Control plain x-ray abdomen showed that the calcified structure has disappeared completely.



The pathology report revealed a hard stony round cavitated ball-like structure. It measured 3.5 cm in diameter, formed of 11 non-organic elements (75.81 %) and the rest was organic material (24.19%) [table.1] with fragmented laminated membrane which confirmed the diagnosis of Echinococcosis [Fig. 6].

Figure 6

Figure 6: Histopathology slide showing fragmented laminated membrane of Echinococcus.

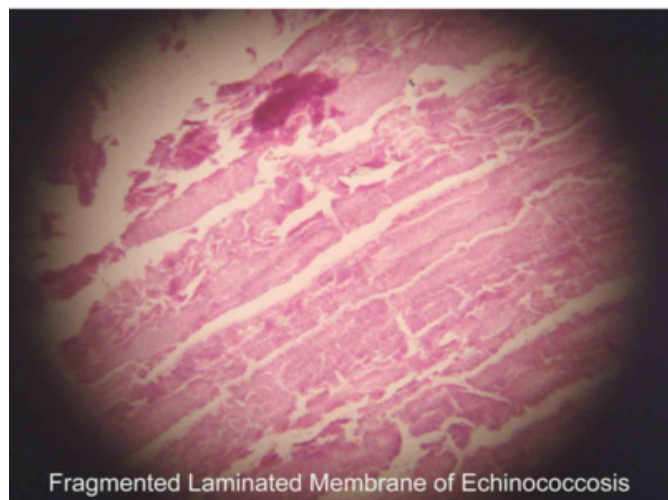


Figure 7

Table 1: Chemical analysis of the calcified structure which passed out with stool

Element	Concentration %
"CaO"	41.36
"P2O5"	30.39
"MgO"	1.55
"No2O"	1.46
"F"	0.59
"Cl"	0.103
"K2O"	0.100
"S1O2"	0.100
"AL2O2"	0.037
"Fe2O3"	0.114
"ZnO"	0.0142
Total	75.81

DISCUSSION

Hydatid disease is due to infestation with the larva the

cestode Echinococcus [1]. The disease is a zoonosis in which humans are incidental hosts of the larva of the parasite [2]. Cystic hydatid disease has a cosmopolitan distribution being particularly in the sheep and cattle raising areas of the world. The dog or other carnivore is the definitive host. The sheep or other ruminant is the intermediate host [3]. Established non-complicated univesicular hydatid cysts can easily be diagnosed on conventional ultrasonography utilizing the pathognomonic double wall-sign [4]. We reported a similar case of a calcified hydatid cyst involved the sigmoid colon, which had fragmented and passed out with stool [5]. Our previous observations allowed us to make correct diagnosis of intraluminal calcified colonic hydatid disease. Hydatid cyst may be found in any organ of the infested host except for hair, teeth or finger nails [6]. The liver and the lungs are the most frequently involved organs. Larvae by passing the liver may affect the following organs in order of frequency: lungs (71%), muscles and cellular tissues (5%), brain (5%), spleen (2.5%), kidneys (2%), other abdominal organs (5%), bone (0.5%), and infrequently the heart, thyroid, and other organs [1]. Briefly hydatid cyst can occur anywhere from the big toe to the crown of the head [7]. On abdominal finding on plain x-ray in hydatid disease is calcification of the wall [8]. X-ray of the abdomen may show spotty calcified densities or a calcified cyst wall. It is usually curvilinear or ring-like and lies in the ectocyst. Daughter cyst may calcify, producing several rings of calcification [9]. Calcification of the wall is diagnostic of hydatid disease. When calcification is extensive, it implies the death of the parasite, because the large calcified surface reduces the nutritional exchange between the cyst and the surrounding parenchyma [10]. Small irregular area is not necessarily indicating death of the parasite [9]. Intraluminal hydatid disease is very rare, as far as we know, only one case was published in literature. In this second case reported herein, there were two hydatid cysts, one of them was hepatic, and the other one was lodged intraluminal in the transverse colon then passed out completely intact with the stool after Albendazole therapy. Finding a liver hydatid cyst, should be a good stimulus to searching for other coexistenet cysts. Utilization of the WSC is simple and very accurate for the identification of hydatid disease, but when the cyst is calcified the WSC is not applicable. Therefore, a proper interpretation of the plain x-ray and CT scan should be done in order to reach to a correct diagnosis.

The importance of this paper is that it shows intraluminal hydatid disease can occur. In this case and the previous

report, showed that the cyst may pass with stool. However, the calcified intraluminal colonic hydatid cyst may lead theoretically to intestinal obstruction and therefore should not be undermined. Finding a liver hydatid cyst, should be a good stimulus to searching for other coexistent cysts.

References

1. Edington G.M. & Gilles H.M.. Pathology in the tropics. The English Language Book Society and Edward Arnold (London) Ltd. 2nd Edition 1976 : 201-206.
2. Piskarski G. the dog tape worm. Medical parasitology in plates Parbenfabriken Bayer AG leverhausen, German Pharmaceutical Division 1963; 98 : 102
3. Manson - Bahr P.E.C. Apter ; Mansons' Tropical Disease.London ; Bailiere Tindall 1982; 245 - 247
4. El Fortia M, Bendaoud M, Shaban A, Gharbi H, Ehtwaish F, ,Roperts D, Gatit A, Belaid A. Nouveau critere pour l'identification du kyste hydatique non complique, le sign de la paroi. J echogr Med ultrason (Fr) 1996; 17 : 30 - 35
5. Kh. T. Kahairy & El Fortia M. hydatid disease of the sigmoid colon. Ain Shams Medical Journal (Cairo) 1994; 45 : 367 - 379.
6. Hadley H.D.M.. Occult hydatid disease presentation as spontaneous pneumothorax. The British Journal of Radiology. 1985: 58.770.
7. Teymoorian G.A., & Bagheri F. Hydatid cyst of the skull report of four cases. Radiology. 1976; 118 : 97 - 100.
8. Langer J.C., Rose D.B., Keystone J.S., Taylor B.R., Langer B. Diagnosis and management of hydatid disease of the liver. Annuals of surgery 1984;199 : 412 - 417
9. Beggs I., The Radiology of hydatid disease.The American J. of Roentgenology. 1985; 145 : 639 - 648.
10. Pandolfo I., Blandino G, Scribano F, Longo M, Certo A., Chivico G. C.T findings in hepatic involvement by echinococcus granulosus. Journal of Computer Assisted Tomography. 1984; 8 : 839 - 845.

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