

Case report

Hydatid cyst of the liver communicating with the left colon

¹A LO CASTO, MD, ²S SALERNO, MD, ²M GRISANTI, MD and ³G MASTRANDREA, MD

¹Istituto di Metodologie Diagnostiche Avanzate-Ismeda, Consiglio Nazionale delle Ricerche, 211 corso Tukory, 90137 Palermo, ²Istituto di Radiologia "P. Cignolini", and ³I Divisione di Chirurgia Generale e Vascolare, Dipartimento di Chirurgia, Universita' di Palermo, 127 via del Vespro, 90127 Palermo, Italy

Abstract. Rupture and secondary infection are common complications of hydatid cyst in the liver. Ultrasound and CT findings are reported in a case of hydatid cyst which has ruptured directly into the left colon. Rupture of hydatid cyst into a hollow viscus is extremely rare. CT demonstrated partial drainage of the cyst contents with the creation of an air–fluid level.

Case report

A 59-year-old woman complained of a dull continuous abdominal pain and dyspepsia for about 10 months before being admitted to hospital for increasing symptoms and fever (38.5 °C). A palpable mass was found in the left upper quadrant. Liver function tests were normal. Haematological analysis showed a marked eosinophilia (20%). An ultrasound (US) examination showed a large oval mass with a well defined wall and a complex echo pattern. Hyperechoic tracts into the wall with acoustic shadowing were noted. US was not able to define the precise extension and origin of the mass although it was firmly connected with the left lobe of the liver. A CT scan (Figure 1) confirmed the cystic nature of the mass, and showed that it extended from the left hemidiaphragm to the level of the sacro-iliac joint. The mass originated from the liver, displacing the stomach posteriorly and was situated between the left transverse and descending segments of colon without interposed fat planes. Its wall was partially calcified and the mass had a mixed density content, predominantly liquid with multiple gas bubbles. An air–fluid level was also appreciable in its upper part. The mass was diagnosed as a hydatid cyst of the liver with contained rupture. The patient decided to postpone treatment due to a temporary improvement of symptoms. The patient was re-admitted 11 days later with sudden deterioration and an anaphylactic reaction (asthma, urticaria and collapse). A second CT scan (Figure 2) showed a reduction in size of the mass with increased gas content, indicating a partial drainage of the cyst

content. No ascites, or biliary tract dilatation were found. Immediate surgery was performed and showed a hydatid cyst originating from the left lobe of the liver communicating with the left colon through a small fistula (2.5 mm diameter), not demonstrated on the CT scan.

Cyst drainage, partial cystectomy and suture of the colonic fistula were performed. Histology confirmed the diagnosis of an hydatid cyst which had ruptured into the left colon. High-dose albendazole therapy was given for 6 months.

Discussion

The diagnosis of hydatid disease may be delayed because of an absence of symptoms. Even when the cyst reaches a considerable size it may produce only non-specific signs due to organ compression, such as abdominal discomfort and dyspepsia. The diagnosis is thus often an incidental finding on clinical or radiological examination carried out for other reasons; or is related to complications that may cause a dramatic presentation. Rupture and secondary infection are common complications. Rupture frequently occurs into the biliary tree (communicating rupture) or peritoneal cavity (direct rupture) [1]. Direct rupture into hollow viscus is very uncommon [2–5]. The natural evolution of hydatid cyst leads to rupture in 50–90% of cases and may cause an allergic reaction [6, 7], sometimes with a fatal outcome. The radiological diagnosis is difficult without concomitant clinical signs of direct rupture although it can be based on the hepatic origin of the cyst, calcification and ring enhancement sign of the wall [8] as demonstrated by CT. In the present case, partial drainage of the cyst and contiguity with the colon supports the diagnosis of direct rupture into the colon. It is also possible that direct rupture into the left colon

Received 31 October 1996 and in revised form 3 February 1997, accepted 10 February 1997.

Address correspondence to Antonio Lo Casto, 7 via Tevere, 90144 Palermo, Italia.

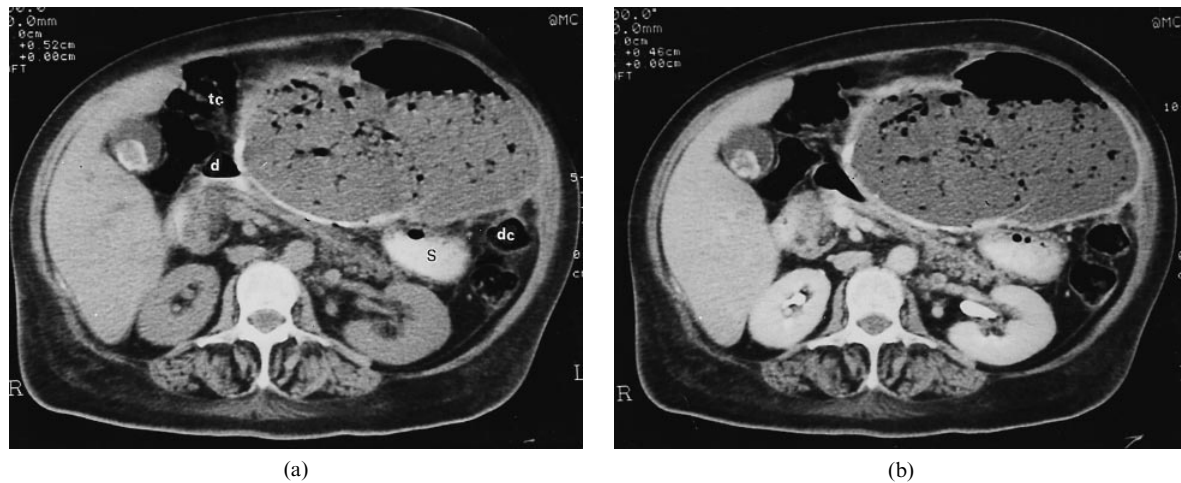


Figure 1. (a) CT scan demonstrates a large oval mass with a partially calcified wall and a fluid content, multiple gas bubbles and an air–fluid level in its upper part. The relationships with transverse colon (tc) and descending colon (dc) are displayed. The stomach (s) and duodenum (d) are posteriorly displaced. (b) CT scan after iv iodinated contrast media; the cyst wall is more evident.

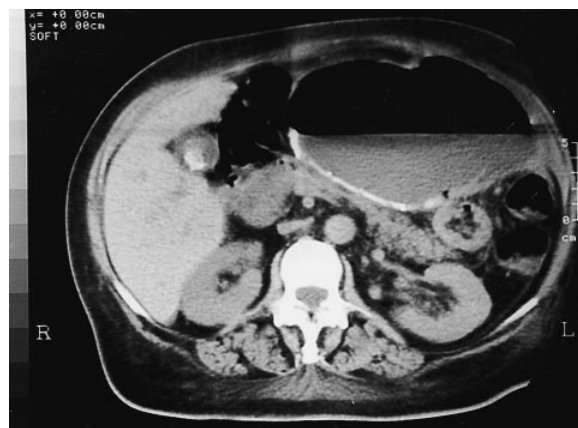


Figure 2. CT examination performed 11 days later shows a reduction of the cyst size with an increased air–fluid level.

occurred on two occasions. This is supported by the fact that only partial drainage of the cyst was observed and may be due to the narrow diameter of the fistula that could have been obstructed by hydatid material. The most common site for direct rupture, the peritoneal cavity, was excluded because of the absence of peritoneal hydatid material or fluid [6].

The differential diagnosis may include a gastrointestinal duplication cyst, an abdominal abscess or a mesenteric cyst; although calcification is not a feature of these conditions. Anaphylactic reaction and eosinophilia should suggest a diagnosis of hydatid disease in the evidence of abdominal mass if other allergic conditions have been excluded. On

the other hand, hydatidorrhoea whenever noted is certainly a specific sign of rupture and intestine communication [2].

Acknowledgments

We would like to thank Professor P Dawson, Radiology Department, Hammersmith Hospital, London, for his critical review of the manuscript.

References

1. Lewall DB, McCorkell SJ. Rupture of echinococcal cyst: diagnosis, classification and clinical implications. *AJR* 1986;146:391–4.
2. Rajeev J, Sukhpal S, Manorama B. Hydatid disease: CT demonstration and follow-up of a cystogastric fistula. *AJR* 1992;158:212.
3. De Maria M, Lagalla R, Calabrese G, et al. La TC nelle cisti idatidiche complicate dell'addome. *Giorn Mal Inf Par* 1991;6:507–12.
4. Noguera M, Alvarez-Castells A, Castella E, et al. Spontaneous duodenal fistula due to hepatic hydatid cyst. *Abdom Imaging* 1993;18:234–6.
5. Placer C, Martin R, Sánchez E, Soletto E. Rupture of abdominal hydatid cyst. *Br J Surg* 1988;75:157.
6. Marti-Bonmanti L, Serrano FM. Complications of hepatic hydatid cyst: ultrasound, computed tomography, and magnetic resonance diagnosis. *Gastrointest Radiol* 1990;15:119–25.
7. Beggs I. The radiology of hydatid disease. *AJR* 1985;145:639–48.
8. Von Sinner WN. New diagnostic signs in hydatid disease; radiography, ultrasound, CT and MRI correlated to pathology. *Eur J Radiol* 1991;12:150–9.