

Hydatid cysts simulating massive ascites

A case report

G. ADAMS, D. J. J. BEZUIDENHOUT

Summary

A patient with the clinical features of massive ascites was found to have extensive intra-abdominal hydatid cysts.

S Afr Med J 1986; 70: 47-48.

Case report

A 60-year-old coloured man was referred from a sheep-farming area, Sutherland in the Cape Province, with a 5-year history of generalized, slowly progressive abdominal distension. This had caused him very little discomfort, and only recently had he developed some swelling of the feet and mild dyspnoea. There were no features suggesting that this was caused by cardiac or pericardial disease, alcohol intake was moderate, and there were no symptoms of a malignant gastro-intestinal lesion or tuberculosis.

On examination there was a trace of ankle oedema but no signs of weight loss or typical stigmata of alcoholic cirrhosis. Abdominal examination revealed clinical features compatible with massive ascites — gross generalized distension, dullness to percussion in the flanks, a fluid thrill, and possible shifting dullness. An ill-defined irregular mass could be felt in the left upper abdominal quadrant and a hard, nodular, 5 cm enlarged liver was palpable.

Because the ascites was so massive, a tuberculous or neoplastic cause was entertained.

Special investigations

Haematological findings, including the differential granulocyte count were normal, as were liver enzyme and serum bilirubin levels. The alkaline phosphatase level was slightly elevated at 118 U/l (normal 36 - 85 U/l) and the total serum protein level was 86 g/l (albumin 32 g/l, globulin 54 g/l). The serum cholesterol level was 3,74 mmol/l. A hydatid complement fixation test was negative. A plain radiograph of the abdomen suggested the presence of ascites (Fig. 1).

The ascitic fluid was a thick, yellow, fatty, mucoid fluid which apparently could not be biochemically analysed! On microscopy, numerous cholesterol crystals and amorphous material were seen. Cytological examination revealed several echinococcal cysts.

An ultrasound scan of the abdomen revealed several cysts and computed tomography (CT) confirmed their presence in the peritoneal cavity and other organs (Fig. 2). The left kidney was non-functioning and a large calcified cyst showed up on intravenous pyelography.

With the diagnosis of hydatid disease of the abdomen, the patient was referred for surgery. At laparotomy the abdominal cavity was found to be filled with a porridgy yellow material and several daughter cysts, histologically typically echinococcal. After

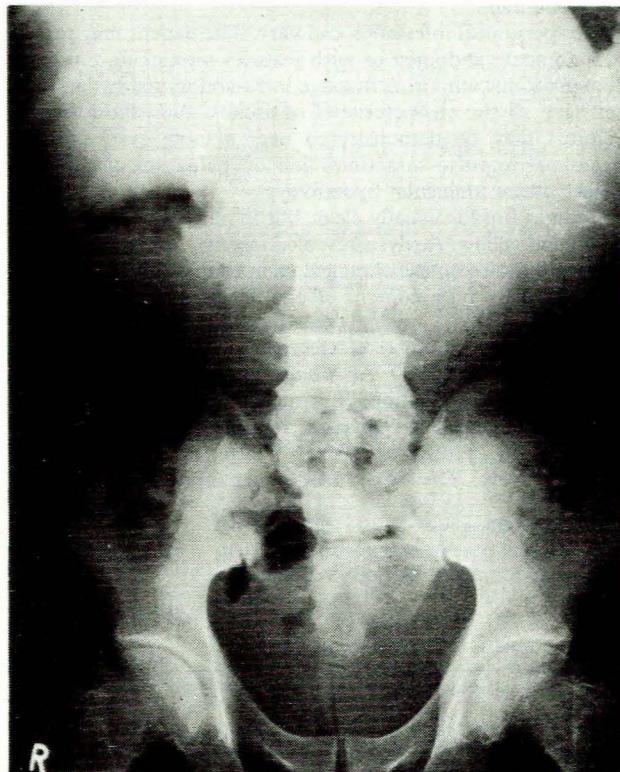


Fig. 1. Plain abdominal radiograph. The vagueness of the organs suggests ascites.



Fig. 2. CT scan demonstrating multiple intra-abdominal cysts.

Gastro-intestinal Clinic, Department of Medicine, University of Stellenbosch and Tygerberg Hospital, Parowvallei, CP

G. ADAMS, F.C.P. (S.A.)

D. J. J. BEZUIDENHOUT, M.D.

lavage (no anaphylaxis occurred), it was discovered that the whole abdominal cavity was really a big cystic bag lining the peritoneum (accounting for the lack of anaphylaxis). An attempt was made to remove as many of the cysts as possible. The patient was discharged

from hospital on mebendazole (Vermox) for treatment of the residual cysts. Unfortunately he did not return for follow-up.

Discussion

Hydatid disease is an infection caused by the larval form of the tapeworm *Echinococcus granulosus*. Man is an intermediate host, the definitive host being the dog. The usual locations are the liver and lungs, and other sites, including the peritoneum,¹ are uncommon.^{1,2}

Intraperitoneal infestation can vary. The patient may present with an acute abdomen or with features mimicking those of a slow-growing tumour. A massive intra-abdominal hydatid cyst can have all the characteristics of ascites. A hydatid thrill or fremitus may be demonstrated over a large cyst; this is a tremulous impulse sometimes felt on palpation of the body surface over a unilocular hydatid cyst.³⁻⁵

Hydatid fluid is usually clear, but in our patient it appeared turbid and yellow. Analysis revealed mostly cholesterol crystals. Previous studies on the chemical composition of hydatid fluids showed a very high content of cholesterol and phospholipids in some cases.⁶

The orthodox method of treatment for hydatid disease of the abdomen is surgery.⁷ An effective systemic scolicidal agent has not yet been developed, but mebendazole and albendazole appear promising. They have been used to attempt to decrease the size of the cyst pre-operatively and to treat residual disease postoperatively. The doses needed are larger than the usual

prescribed anthelmintic doses, e.g. 50 - 100 mg/kg/d for a minimum of 3 months. Limited absorption necessitates using such large doses, and the drugs do have some serious side-effects during long-term treatment.⁸⁻¹¹

We wish to thank Dr C. Viviers, Chief Medical Superintendent of Tygerberg Hospital, for permission to publish.

REFERENCES

1. Hunter GW, Swartzwelder JC, Clyde DFC. *Tropical Medicine*. 5th ed. Philadelphia: WB Saunders, 1976: 609-615.
2. Beaver PC, Jung RC, Cupp EW. *Clinical Parasitology*. Philadelphia: Lea & Febiger, 1984: 527-533.
3. Bar-Maor JA, Lernan OZ. Giant abdominal cysts simulating ascites. *Am J Gastroenterol* 1981; **75**: 55-56.
4. Gordon MJ, Sumner TE. Abdominal ultrasonography in a mesenteric cyst presenting as ascites. *Gastroenterology* 1975; **69**: 761-764.
5. Ford JR. Mesenteric cysts: review of the literature with report of an unusual case. *Am J Surg* 1960; **99**: 878-884.
6. Frayha GJ, Bahr GM, Haddad R. The lipids and phospholipids of hydatid protoscolices of *Echinococcus granulosus* (Cestoda). *Int J Parasitol* 1980; **10**: 213-216.
7. Davidson RA. Issues in clinical parasitology: the management of hydatid cyst. *Am J Gastroenterol* 1984; **79**: 397-400.
8. Wilson JF, Davidson M, Rausch RL. Clinical trial of mebendazole in the treatment of alveolar hydatid disease. *Am Rev Respir Dis* 1978; **118**: 747-757.
9. Kayser HJS. Treatment of hydatid disease with mebendazole at Frere Hospital, East London. *S Afr Med J* 1980; **58**: 560-563.
10. Schantz PM, Kammerer WS. Echinococcosis. In: Conn HF, ed. *Current Therapy*. Philadelphia: WB Saunders, 1983: 15-16.
11. Sainot AG, Meulemans A, Grimieux AC *et al*. Albendazole as a potential treatment for human hydatidosis. *Lancet* 1983; **ii**: 652-656.