Primary Hydatid Disease in Unusual Sites


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This paper presents three cases of primary hydatid cysts of different sites. It confirms that this disease is systemic, and can affect any organ. Although the occurrence is not common, it is necessary for the clinician to consider it in the differential diagnosis of tumours, so as to avoid serious complications in a relatively benign condition, which can be misdiagnosed.

Three unusual cases of hydatid disease presented to the authors, in the period 1984-1990. Two males aged 25 and 42 years, and a female aged 60 years had cysts in the perivascular subcutaneous tissue of the right thigh, the transverse mesocolon, and the diaphragm respectively. No other sites were involved; all cases were treated successfully by surgery.

We report these cases with a review of the international literature.

Patients and Methods

Case no. 1
A 25-year-old male, presented with a painless lump in the upper anterior part of the right thigh; fullness with transmitted pulsations were felt along the upper part of the femoral vessels.

On exploration, three cysts, each of 1.5 cm diameter, were found; partial excision of the three cysts was performed, the laminated membranes and hydatid fluid were removed. The posterior part of the adventitia of these cysts was formed by the wall of the femoral vessels.

Histopathological diagnosis of hydatid cysts was confirmed, and the patient's work up revealed no involvement of any other organ.

Case no. 2
A 42-year-old male presented with vague, gradually progressive, epigastric abdominal pain, non-specific dyspepsia, and epigastric fullness; of 3 years duration. Clinically the patient was not jaundiced. He was in a good general condition, with a rounded epigastric mass of 10 cm diameter, which was non-tender, and freely mobile.

Abdominal ultrasonography and computed tomography revealed a multilocular cyst about 20 cm in diameter anterior to the pancreas and stomach, suggestive of a hydatid cyst. An indirect haemagglutination test was positive in a titre of 1/1860.

At operation, the cyst was removed intact from the transverse mesocolon, it was causing mechanical pressure on the stomach and transverse colon, without liver involvement.

Histopathology proved the diagnosis.

Case no. 3
A 60-year-old female presented with pain in the right upper abdominal quadrant. She had no detectable physical signs on examination, but an ultrasonogram was suggestive of a hydatid cyst of the liver, which was fixed to the diaphragm. Computed tomography was suggestive of a hydatid cyst of the diaphragm. An indirect haemagglutination test was positive, in a titre of 1/800.

At operation, the lesion proved to be a hydatid cyst, 12×8 cm, attached to the posterior muscular part of
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part of the right diaphragm, displacing and deforming the right lobe of the liver, without hepatic involvement.

The cyst was excised completely with partial excision of the muscle thickness that was repaired.

Histopathology proved the diagnosis.

Discussion

Hydatid disease occurs more frequently in the Middle East than in Western Europe and the USA.

It is found in rural areas, because of a lack of hygiene, the presence of stray dogs, and close contact between man and animals.

One may add the impact of infected animals, the increase in sheep rearing to meet the demand for food in an increasing population, and slaughtering at home.22

Because of these factors one would expect an increase to occur in its incidence including the involvement of extrahepatic sites.

In humans, the disease starts with an infestation by the larval form of the dog tapeworm, Echinococcus granulosus, and the embryos become trapped in the liver in 80% of cases.

The pathogenesis of primary extrahepatic hydatid cyst, remains poorly understood. There may be migration of the embryos through portosystemic connections via the lymphatics, or escaping the liver filter into the systemic circulation,23 where they can infect any organ in the body.

Immediate inoculation of Echinococcus ova by dogbite has been suggested by Toole 1935,24 and echoed by Manouras 1989,25 but this suggestion has not been confirmed.

Hydatid disease in the subcutaneous tissues is a rare condition, that accounts for about 0.1–1.0% of its presentations.1 Other reported sites are the cheek,2 over the parotid gland,2 and as manifestation of generalized hydatidosis.4 After reviewing the literature we could not find reports of subcutaneous and perivascular involvement around the femoral vessels. Diagnostic puncture of a subcutaneous lump should be done cautiously to prevent dissemination of the disease.1–5 A subcutaneous hydatid cyst might go undiagnosed, then become open and drain with sinus formation. Partial or complete excision of a subcutaneous hydatid cyst should be attempted, and it is the treatment of choice.

Hydatid cyst of the mesocolon is usually associated with hydatid disease of the liver. Our review of the literature failed to identify reports of a primary hydatid cyst of the transverse mesocolon such as was found in our case. Computed tomography was diagnostic, and total excision of the cyst was possible.

Hydatid cyst of the diaphragm is usually due to a direct extension from the surrounding structures, the liver,6–9 lung,10–12 or both.13,17 Others reported extension of the disease from the pericardium.16 Primary diaphragmatic lesions are quite rare, and only three cases were reported in the literature,19–21 they were discovered incidentally. Total excision of the cyst was possible in our patient with repair of the diaphragm.

The diagnosis of hydatid disease in such locations comes from proper history taking, the clinical examination and a high level of suspicion. Ideally, serological studies and ultrasonography should be done for suspicious lumps. Computed tomography is necessary for abdominal hydatid disease to confirm the location and the extent of the disease, as these factors may be of utmost importance in planning surgery.

Conclusion

As hydatid disease is expected to increase in incidence, more cases are likely to appear in unusual sites. The diagnosis can be extremely difficult, as the disease remains symptomless, until discovered during surgery, or when a complication arises such as infection, rupture with anaphylaxis, or iatrogenic trauma with sinus formation.

Surgeons in endemic areas, dealing with a lump anywhere in the body, should consider a hydatid cyst as one possible cause.

References


