

Hydatid Cyst Presenting As Multiple Peritoneal Cysts Adjacent to the Stomach: A Rare Case Report

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ABSTRACT

Here we are presenting a case of a 62-year-old man presented with recurrent epigastric pain, fever and vomiting. CT showed multiple peritoneal cysts adjacent to stomach. Excision was performed and cyst fluid smears prepared. Diagnosis of hydatid cyst was made.

The present case highlights the diagnostic value of rare multiple peritoneal cyst seen in the stomach wall.

Keywords: Hydatid cyst, echinococcus granulosus, proctoscolices, cytology

Case History

A 62-year-old man presented with recurrent epigastric pain, fever and vomiting. CT showed multiple peritoneal cysts. Excision was performed and cyst fluid smears prepared. Based on cytological and histological diagnosis Diagnosis Hydatid cyst.

CT Imaging

Abdominal CT Showed multiple hypodense cystic lesions on stomach wall in the peritoneum. Largest measuring 3x3cm.

Gross

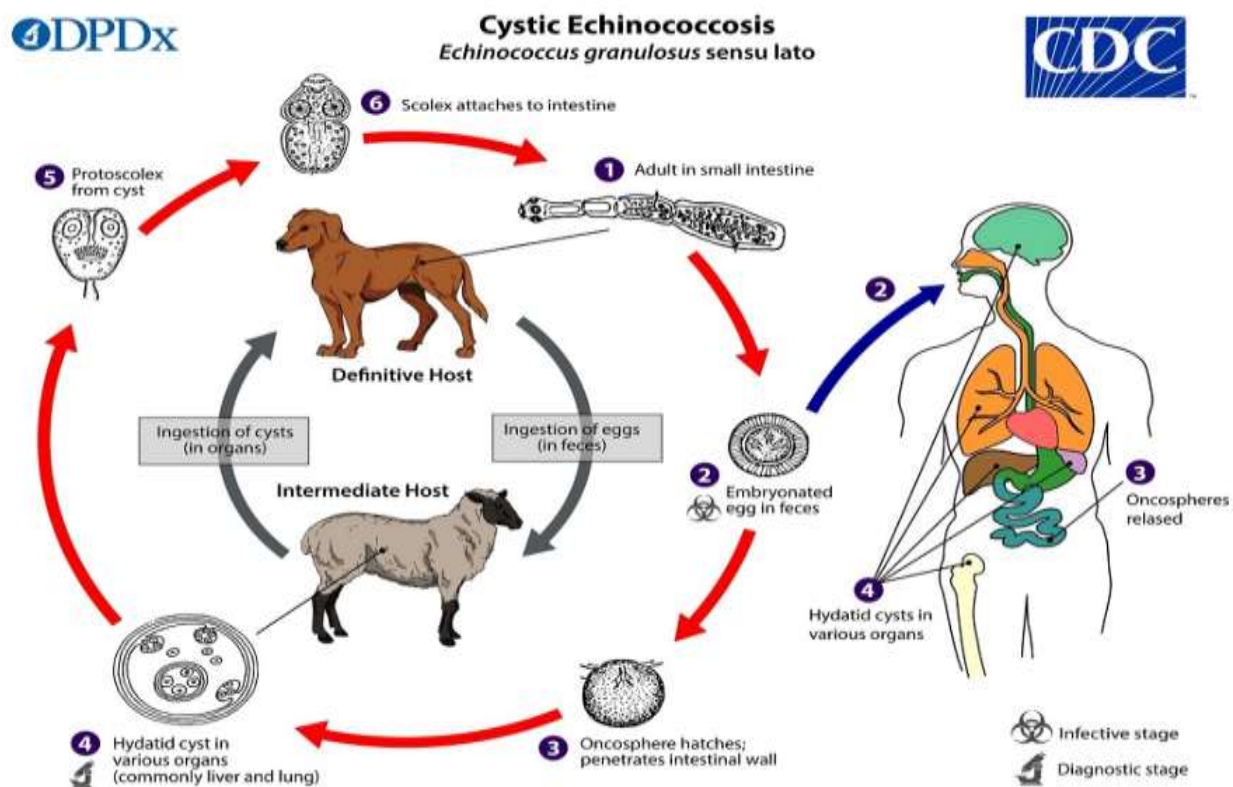


Hydatid cyst appears spherical, measuring 10x10x10 cm and has a fibrous rim and containing several daughter cysts

Discussion

Hydatid disease is caused by the larval stage of *Echinococcus granulosus*. Liver and lung are common sites; peritoneal involvement is uncommon. Hydatid disease is a zoonotic parasitic infection caused predominantly by *Echinococcus granulosus*. It remains endemic in many livestock-raising regions. Peritoneal hydatid disease is uncommon and usually results from secondary dissemination following rupture of hepatic cysts, although primary peritoneal disease can occur. In the present case, cytological examination demonstrated laminated membrane fragments, protoscolices and refractile hooklets, which are considered diagnostic. Hydatid disease requires clinicoradiological correlation. Cytology is highly specific when laminated membrane, hooklets and protoscolices are identified. Image-guided sampling should be performed cautiously because of the risk of cyst rupture and anaphylaxis. Differential diagnosis includes other cystic lesions of the peritoneum. Combined surgery and albendazole therapy reduces recurrence. Long-term follow-up is advised.

Hydatid disease is a zoonotic parasitic infection caused predominantly by *Echinococcus granulosus*. It remains endemic in many livestock-raising regions. Peritoneal hydatid disease is uncommon and usually results from secondary dissemination following rupture of hepatic cysts, although primary peritoneal disease can occur. In the present case, cytological examination demonstrated laminated membrane fragments, protoscolices and refractile hooklets, which are considered diagnostic. Radiological imaging complements cytology by defining the number, size and anatomical relationships of cysts. Fine-needle aspiration is generally reserved for selected cases because of concerns regarding leakage and anaphylaxis, but when performed carefully it can provide rapid diagnostic confirmation.



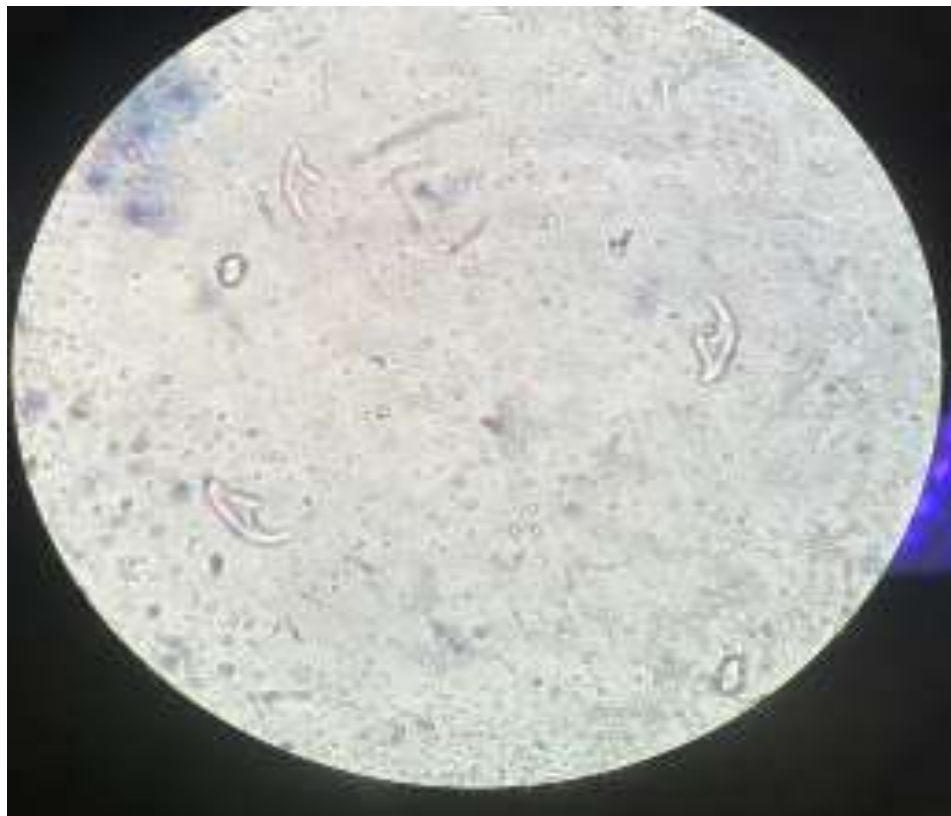
Lifecycle diagram of *Echinococcus granulosus* 11.

Recognition of the characteristic cytomorphological features is essential because several benign and malignant cystic lesions may mimic hydatid disease. Mesenteric cysts, lymphangiomas, pancreatic

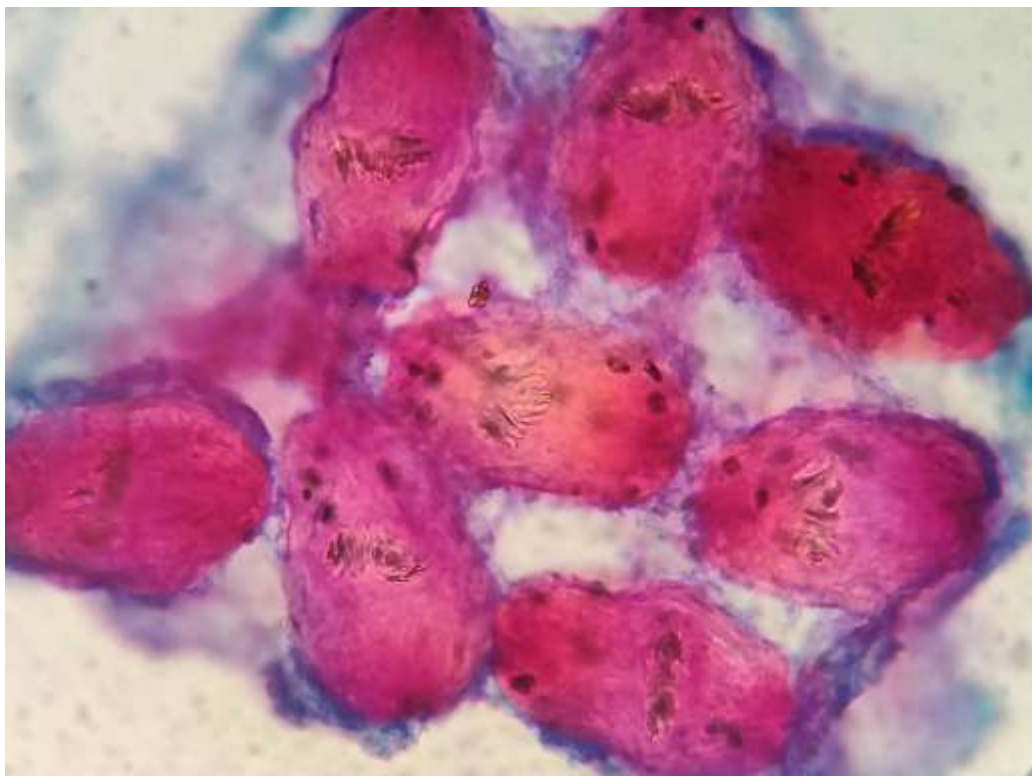
pseudocysts, enteric duplication cysts and cystic neoplasms lack the combination of laminated membrane, scolices and hooklets. Correlation with imaging and clinical findings improves diagnostic confidence.

Management depends on cyst location, size and complications. Surgery remains the preferred treatment for many symptomatic or complicated lesions, combined with perioperative albendazole to reduce recurrence. The PAIR (puncture, aspiration, injection and re-aspiration) technique is an accepted alternative in selected uncomplicated cases under experienced supervision. Long-term follow-up with imaging is recommended because recurrence may occur after intraoperative spillage or incomplete removal.

The present case highlights the diagnostic value of cytology in unusual peritoneal hydatid disease. Awareness of its classical microscopic findings enables prompt diagnosis and appropriate management while avoiding unnecessary extensive surgery. Published literature consistently emphasises that multidisciplinary assessment integrating clinical, radiological and cytopathological findings provides the highest diagnostic accuracy. Future studies with larger case series will further refine diagnostic algorithms and optimise treatment strategies in rare presentations.



Cytology smear showing refractile hooklets.

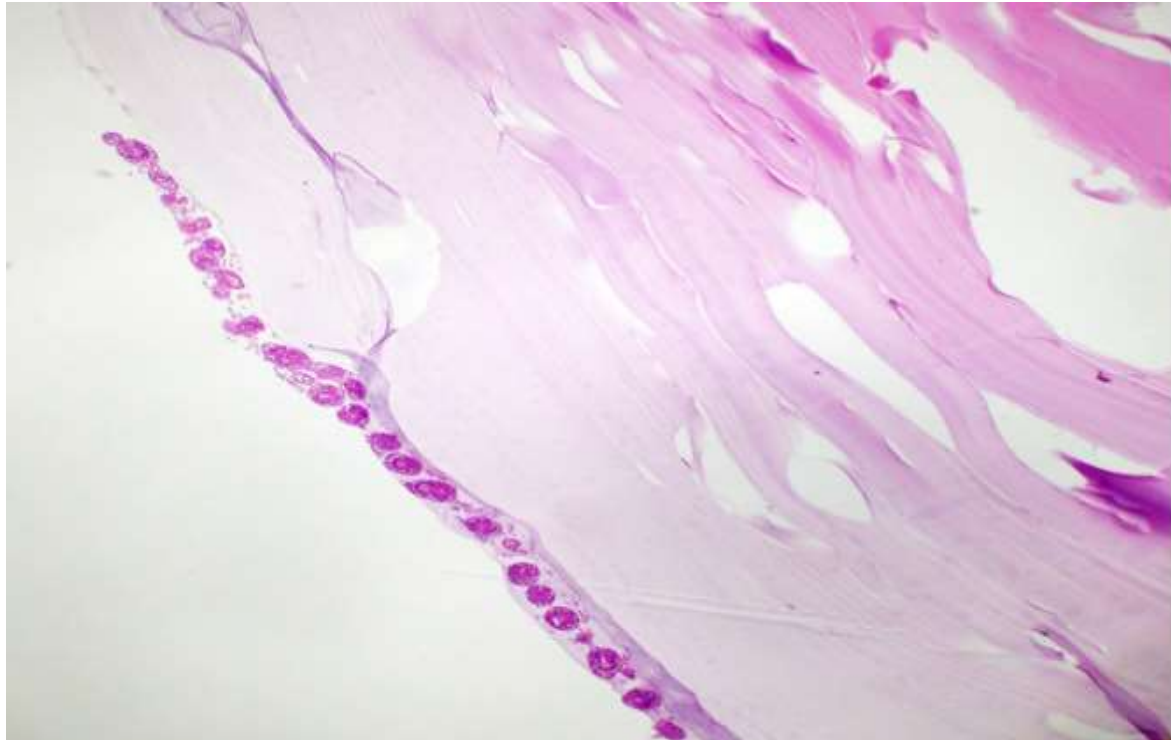


Cytology smear showing protoscolices.

- **Histopathology showed .**

Cyst wall has 3 structural components. It has Outer acellular laminated membrane which is usually 1 mm thick. Germinal membrane has a transparent nucleated lining. Protoscolices are seen attached to the membrane and budding from it. Protoscolices are ovoid and contain hooklets. They are birefringent

under polarized light and a sucker. Outer fibrotic layer with granulation tissue with increased eosinophils also exists.

**Differential Diagnosis includes the following**

- Mesenteric cyst
- Enteric duplication cyst
- Pancreatic pseudocyst
- Cystic lymphangioma
- Abscess
- Cystic neoplasm

Hydatid cyst is distinguished by protoscolices, hooklets and laminated membrane which are not seen in the other types of cysts.

Treatment

Surgery with perioperative albendazole is standard for suitable cases. PAIR is an option in selected uncomplicated cysts.

Prognosis

Excellent after complete removal without spillage rupture increases recurrence risk.

References

1. Moro P, Schantz PM. Echinococcosis: a review. Int J Infect Dis. 2009;13:125-133.
2. McManus DP, et al. Echinococcosis. Lancet. 2003;362:1295-1304.
3. Vuitton DA, et al. Expert consensus for cystic echinococcosis. Parasite. 2020.
4. Junghanss T, et al. Clinical management of cystic echinococcosis. Lancet Infect Dis. 2008.

5. Eckert J, Deplazes P. Biological aspects of Echinococcus. Clin Microbiol Rev. 2004.
6. Dziri C, et al. Management of hydatid disease. World J Surg. 2004.
7. Sayek I, Onat D. Diagnosis and treatment of hydatid cyst disease. HPB. 2001.
8. Kern P, et al. Echinococcosis: clinical features. Adv Parasitol. 2017.
9. WHO Informal Working Group on Echinococcosis. Classification for CE cysts.
10. Garcia HH, Del Brutto OH. Cystic echinococcosis up date.
11. Echinococcus by CDC
12. Brunetti E, et al. Acta Trop. 2010;114:1-16.
13. WHO. Echinococcosis.
14. Orell & Sterrett's Fine Needle Aspiration Cytology. 6th ed.
15. WHO Classification of Tumours: Digestive System Tumours. 5th ed