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A Rare Imported Case of Hepatic Hydatic Cyst in Singapore

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Introduction

- Hydatid disease is a zoonosis caused by Echinococcus tapeworms.
- It is endemic in the Middle East, Central Asia and the Mediterranean, but rare in developed countries like Singapore.
- Canines are definitive hosts while livestock are intermediate hosts. [1]
- Humans are accidental intermediate hosts infected by ingestion of eggs from environmental contamination by animal faeces. (Figure 1)

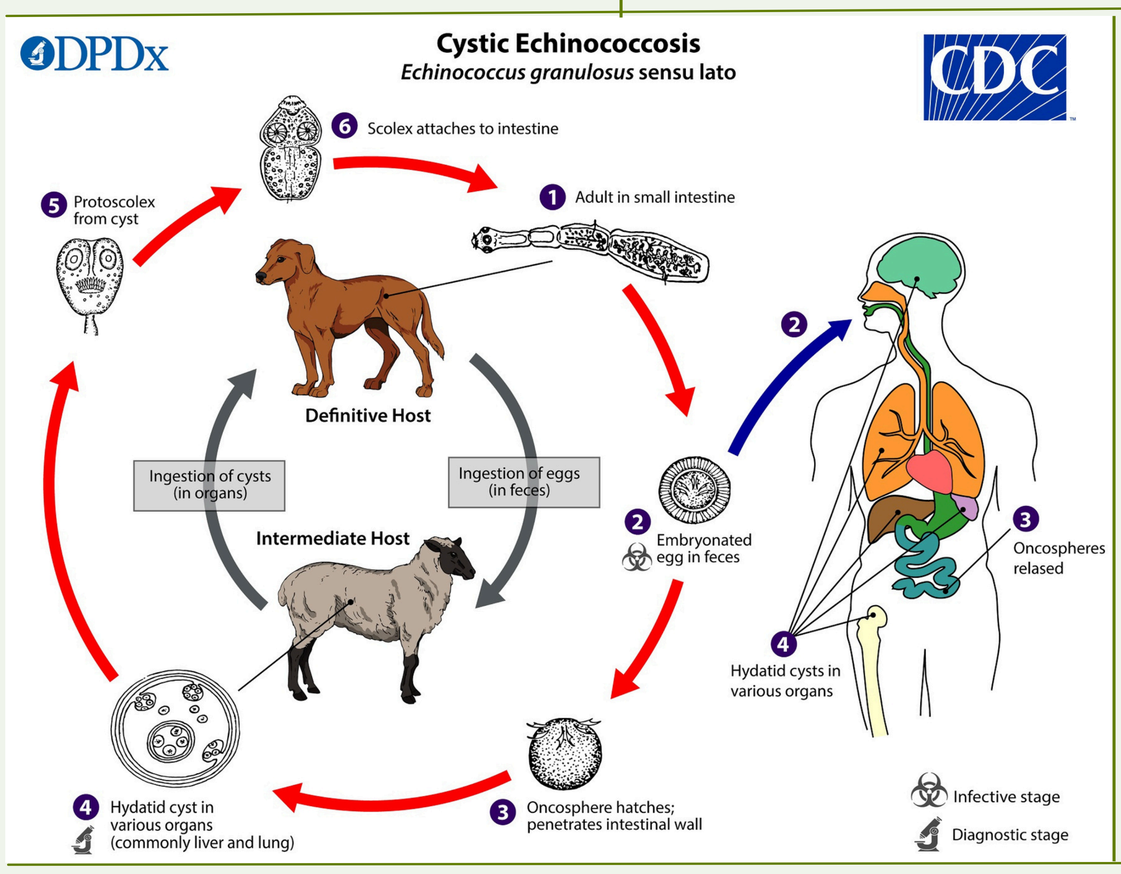

Figure 1: Echinococcus species Life Cycle. [1]

Case Presentation

We report a rare case of hepatic hydatid disease in a 72-year-old Singaporean man with travel history to Saudi Arabia for Muslim religious pilgrimages. He avoided contact with canines for religious reasons and denied livestock exposure.

In 2020, he was admitted for fever, during which an abdominal Computed Tomography (CT) scan incidentally revealed two hepatic cysts with septations. The larger Segment 7 and 8 cyst contained detached membranes, with eventual development of a water-lily sign (Figure 2a) in a follow up scan. A separate segment 6 cyst showed multiple daughter cysts within. These were monitored outpatient and remained stable.

In November 2021, his fever recurred, likely due to chest infection. He was diagnosed with stage CE3b hepatic cystic echinococcosis, based on imaging findings and positive serum Echinococcus antibody.

He was started on albendazole and underwent PAIR (puncture, aspiration, injection of scolicidal agent and re-aspiration) of Segment 6 in September 2022 as he declined surgery. Echinococcus species were identified in the cyst fluid. (Figure 2b) Albendazole was discontinued two months post-procedure, and he remains well.

Figure 2a: CT image showing a well-defined cystic lesion with internal floating internal membranes, characteristic of the "water lily" sign.

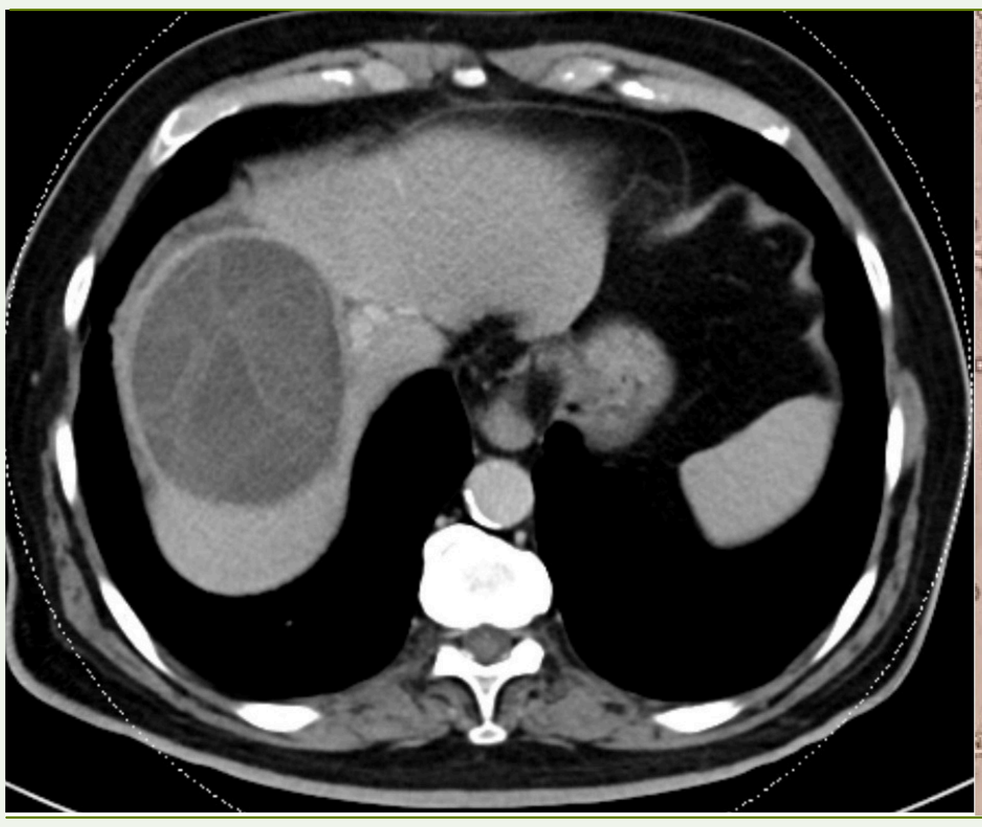

Figure 2b: Microscopic image of Echinococcal cyst noted in cyst fluid

Conclusion

- This case highlights the importance of clinical vigilance for imported Echinococcus infections.
- Early recognition is essential to prevent complications including cyst rupture with anaphylaxis, biliary communication and superimposed infection. [2]

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