

Case Report

A rare case of hydatid cyst at unusual location

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Abstract

Hydatid cyst is caused by parasitic infection of tape worm *Echinococcus* species. Hydatid cyst commonly found in liver and lung. Young children are more associated with extra hepatic cysts in lungs, brain and orbital sites. It rarely found in scalp region. A 20 year female presented with complain of scalp swelling at parietal region since 15 days with clinical diagnosis of brain abscess. On radiological investigation CT findings shows thick extra cerebral collection with meningeal involvement suggestive of osteomyelitic changes and large extra cranial thick hypodense cystic collection found. Aspiration of abscess fluid done and sent for routine micro investigation. In routine microscopy found hooklets of *echinococcus granulosum* in wet mount smear and MGG smears. After this routine microscopy report excision of brain abscess done and specimen sent for histopathological investigation where also found lamellated layers of hydatid cyst and hookletes. So, early diagnosis of hydatid cyst at unusual location by routine microscopy can help in treatment.

Key words

Hydatid cyst, *Echinococcus*, Scalp, Routine microscopy.

Introduction

Hydatid cysts were recognized from the time of Hippocrates and Galen caused by *echinococcus* species. *Echinococcus granulosum* is unilocular, subspherical shape and size varies from

millimeter to >30 cm. Most commonly hydatid cyst found in liver and lung. Young children are more associated with extra hepatic cysts in lungs, brain and orbital sites. It rarely found in scalp region.

Case report

A 20 year female presented with complain of scalp swelling at parietal region since 15 days with clinical diagnosis of brain abscess. On radiological investigation, CT findings showed large hypodense thick extra cerebral collection with meningeal involvement suggestive of osteomyelitic changes and large extra cranial thick hypodense cystic collection found. Aspiration of abscess fluid done and sent for routine micro investigation. On routine micro report shows 8000 cells/cumm with predominantly polymorphs and surprisingly found hooklets of echinococcus species. Excision of brain abscess done and specimen sent for histopathological investigation. Biopsy report also found cyst wall of hydatid cyst (**Figure – 1 to 6**).

Figure - 1: (A) CT report of patient showing extracranial thick hypodense cystic collection, (B) EDTA sample of aspirated abscess fluid for routine microscopy.

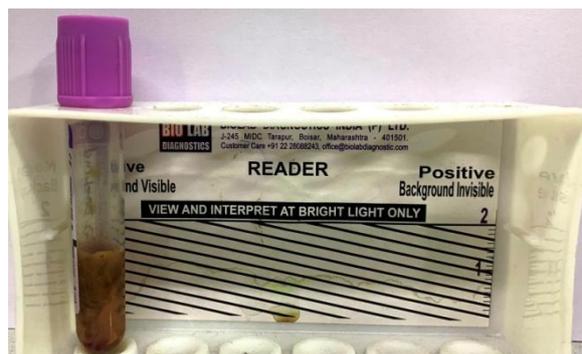
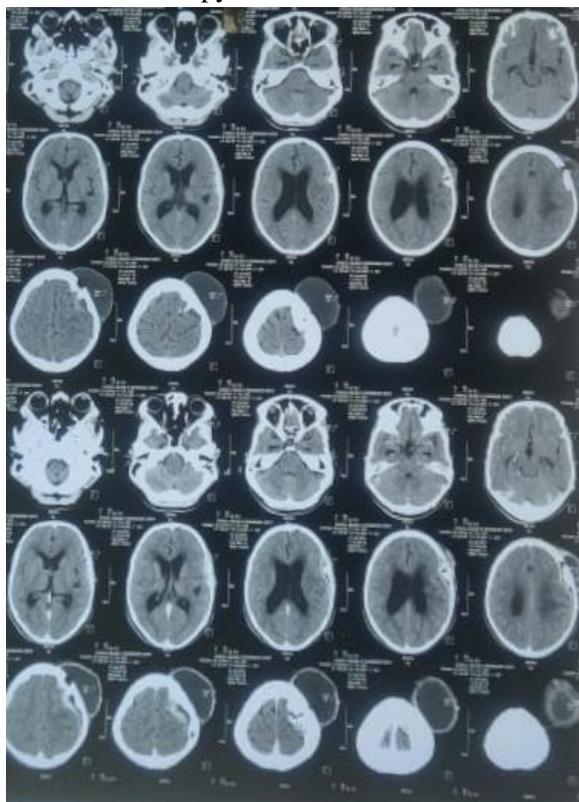
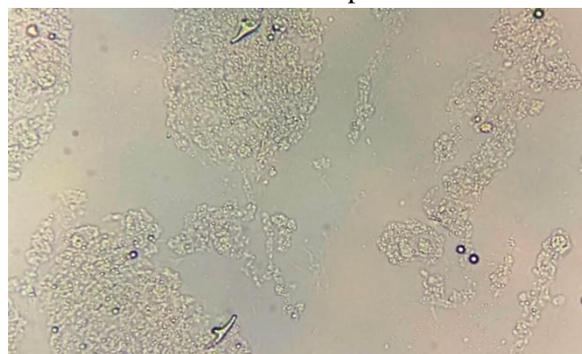


Figure - 2: Excision of cyst specimen for histopathological examination.



Figure - 3: Wet mount of Fluid sample showing hooklets of echinococcus species.



Discussion

Hydatid cyst most commonly found in liver and lung. Scalp region hydatid cyst found rarely. In routine micro investigation 2 ml, turbid, yellow colored fluid from scalp swelling received. On wet mount and microscopy found many hooklets suggestive of echinococcus granulosum (Hydatid cyst), which is very unusual finding. On microscopy of excision biopsy from scalp swelling found lamellated layer, inner germinal epithelial layer and few

brood capsule with enclosing protoscolices with hooklets of hydatid cyst.

Figure - 4A & B: MGG and Field stain (100X) in routine microscopy showing hooklets of Echinococcus.

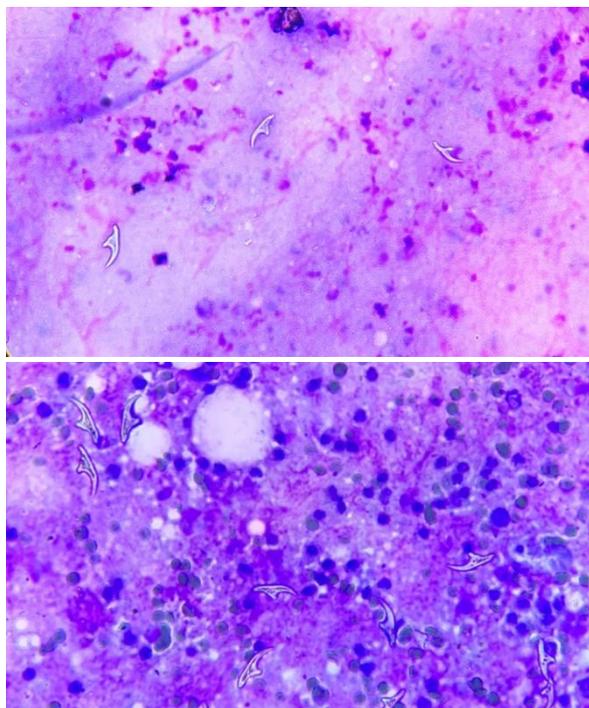
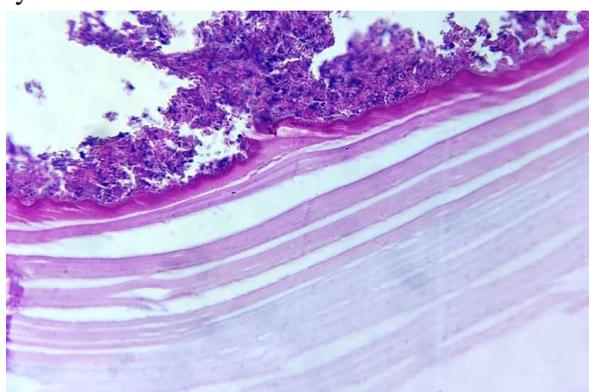


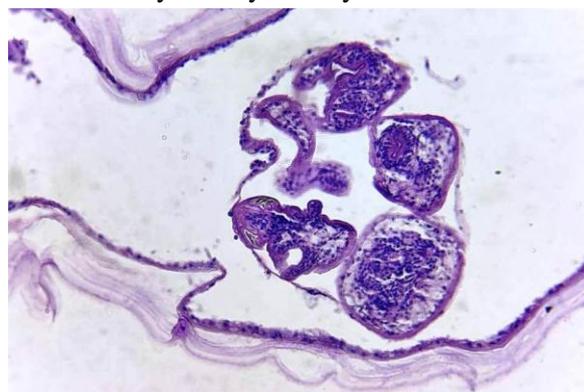
Figure - 5: H&E (40X) smear of histopathologic examination shows lamellated layers of hydatid cyst.



Conclusion

A case presented with clinical diagnosis of brain abscess with osteomyelitis parietal bone is diagnosed hydatid cyst on the basis of early routine microscopic findings of hooklets and later confirmed by biopsy. So, early routine microscopic findings of rare organisms can lead to better outcome.

Figure - 6: H&E (40X) smear of histopathologic examination shows brood capsule with protoscolices, germinal epithelial layer and lamellated layer of hydatid cyst.



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