

Cyst Happens: A Tour Through Hydatid Hideouts

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1. INTRODUCTION

The causative organisms of hydatid disease are *Echinococcus granulosus*, *Echinococcus multilocularis* and *Echinococcus oligarthrus*. Among these the most common one is *Echinococcus granulosus*. It is the larval stage of the organism that affects the man. Although the larval stage of the parasite can thrive in many parts of the body, in 80% of cases it does so in the liver. The adult *Echinococcus* resides in the small intestine of the definitive host. The gravid proglottids release eggs which are passed in the feces and are infectious. On ingestion by a suitable intermediate host (such as humans) the eggs hatch in the small intestine and release six-hooked oncospheres which penetrate the walls of intestine and migrate through the circulatory system to various organs like the liver and lungs. On reaching the organs, these oncospheres develop into thick walled hydatid cyst that gradually enlarges and produces daughter cysts at the interior of the cyst. If the cysts rupture, the protoscolices may create secondary cysts in other sites within the body known as secondary echinococcosis.

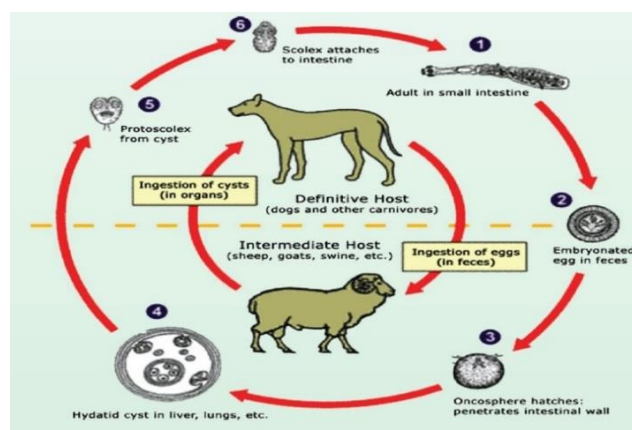


Figure 1: Life cycle of Echinococcus

Aim and Objectives

To study Hydatid cyst at various locations in our body by means of USG ,CT, MRI and X-rays.

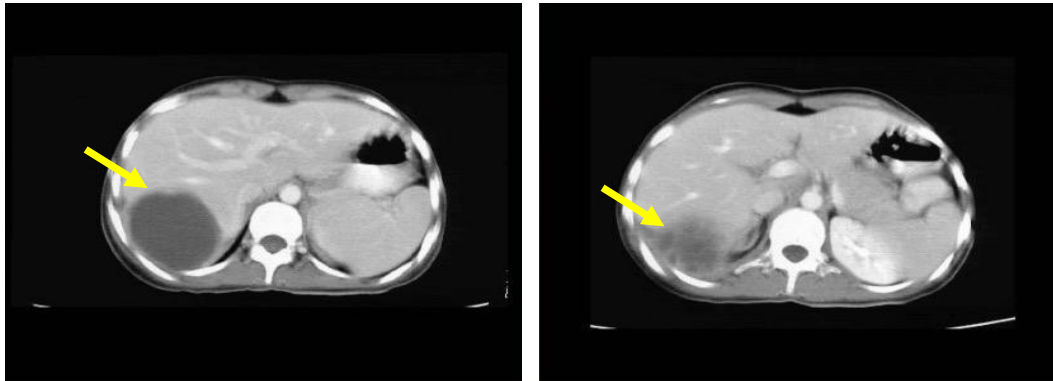
2. MATERIAL AND METHODS

The present study is a retrospective study of 20 patients suffering from Hydatid disease of various sites. They were evaluated by USG, CT scan, MRI and X-rays. The study was carried out over a period of 5 months from October 2021 till February 2022. CECT was performed on 128 slice GE Optima 660 scan machine. MRI scan was performed on 3 Tesla machine. Patients of all age groups were included in the study.

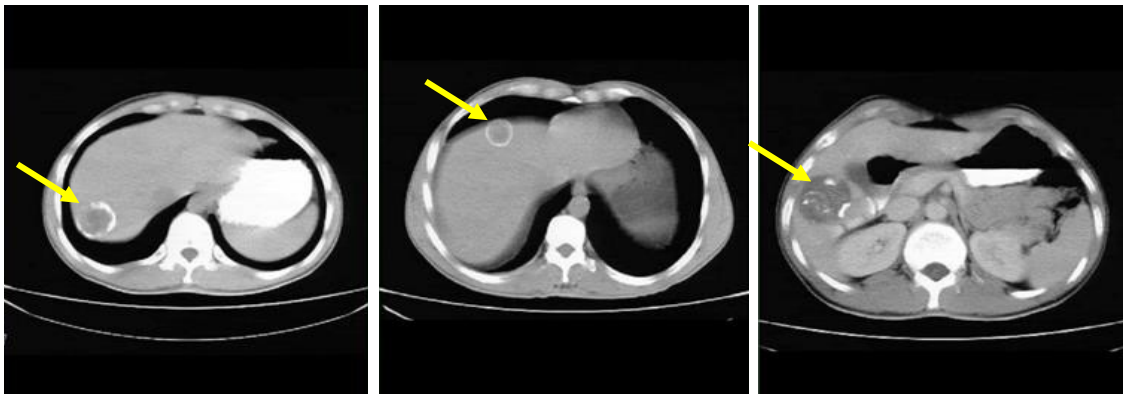
Imaging Findings

Case 1 : A 19 years old female presented with complaints of pain and lump in right hypochondrium since 3 months.

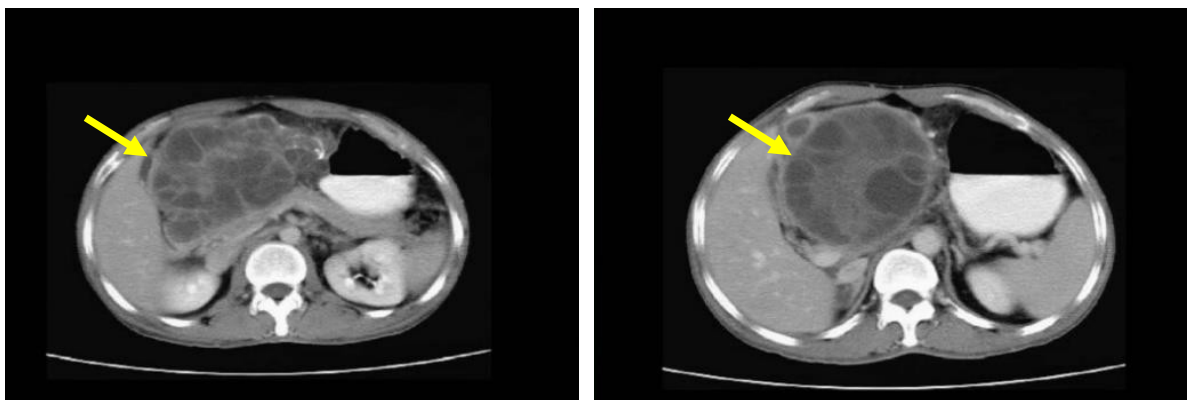
Findings –



A well defined cystic hypodense fluid containing lesion with daughter cysts and septas seen in the right lobe of liver (segments 6 and 7).

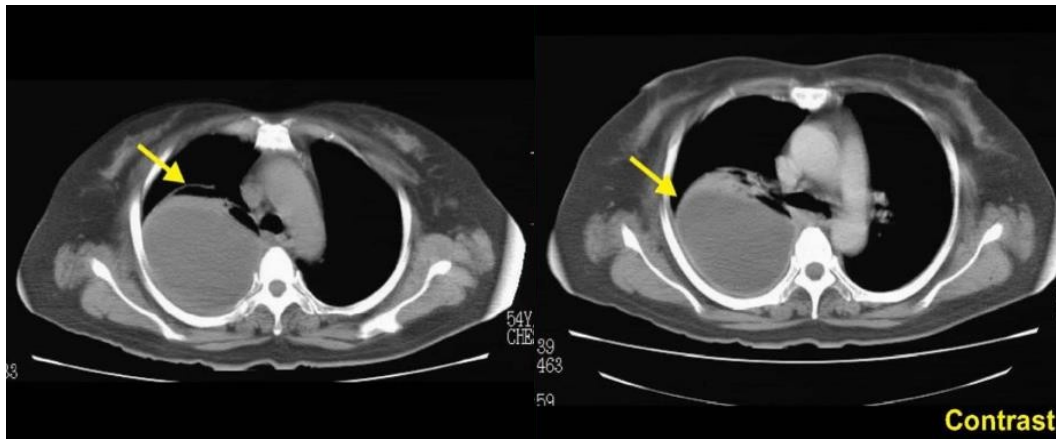


Cystic lesion with calcified walls is seen in different segments of liver.



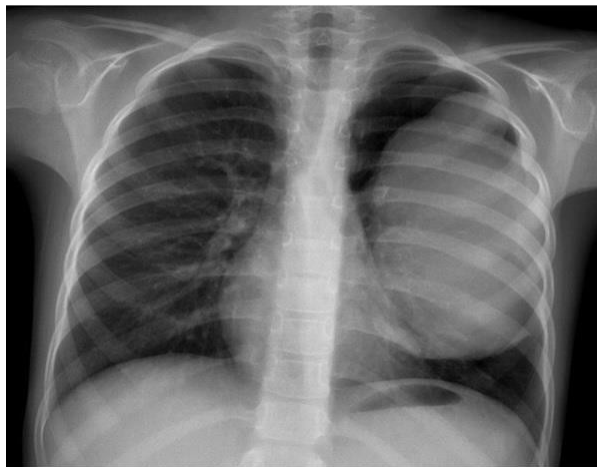
There is hydatid cyst with multiple daughter cysts and wall calcification noted in the left lobe of liver.

Case 2 : A 54 years old patient presented with complaints of fever, cough and breathlessness since 2 weeks.



Findings –

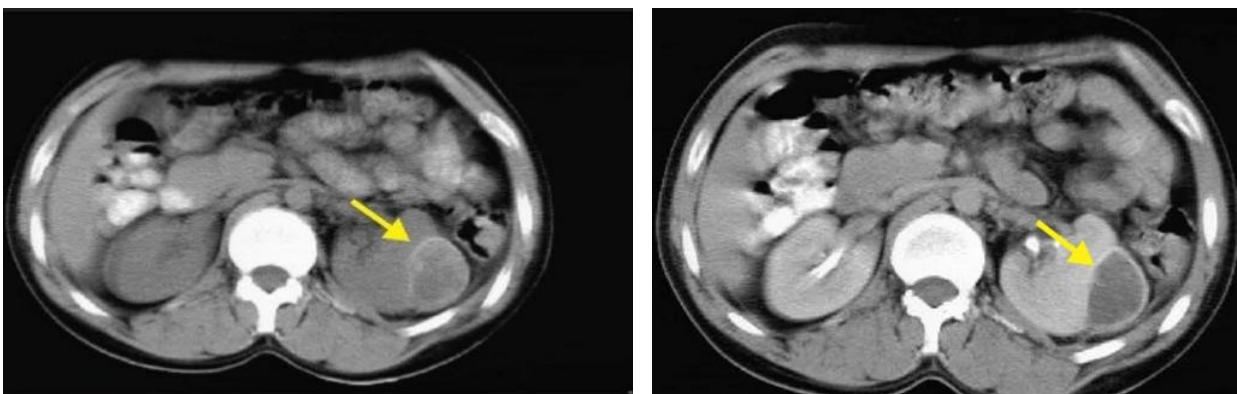
A well-defined hypodense cystic lesion with thick enhancing walls.



A large well-defined radiopaque lesion is seen occupying almost left lung field.

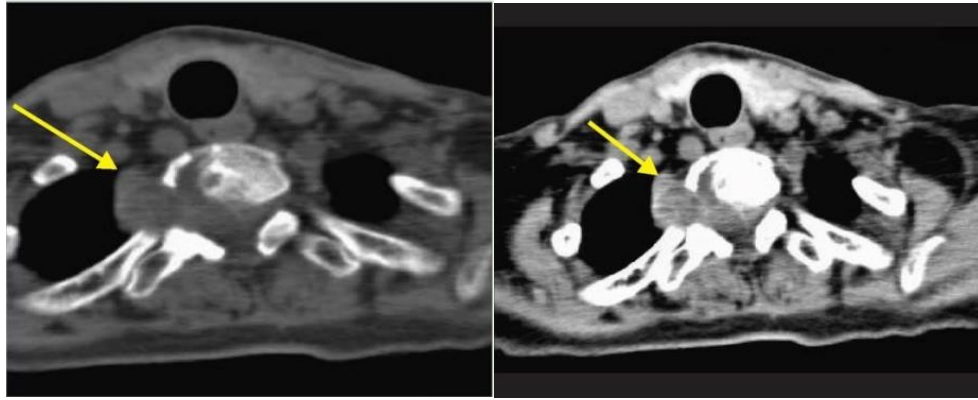
Case 3 : A 27 years old male presenting with complaints of vague abdominal pain, low grade fever and sensation of abdominal fullness since 2 weeks.

Findings –

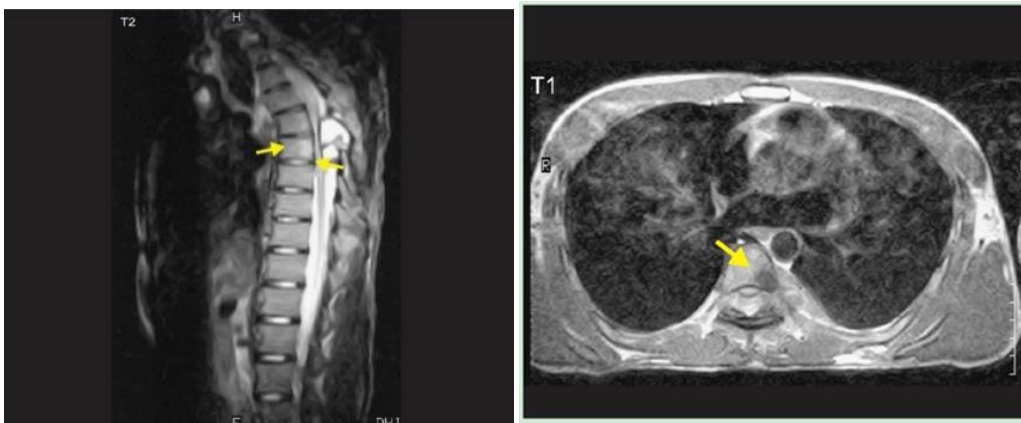


CT showed a hydatid cyst in the mid pole of left kidney with septation and calcification of the wall.

Case 4 : A 24 years old male presented with pain and stiffness in neck since 2 months. Patient was referred for CT spine.

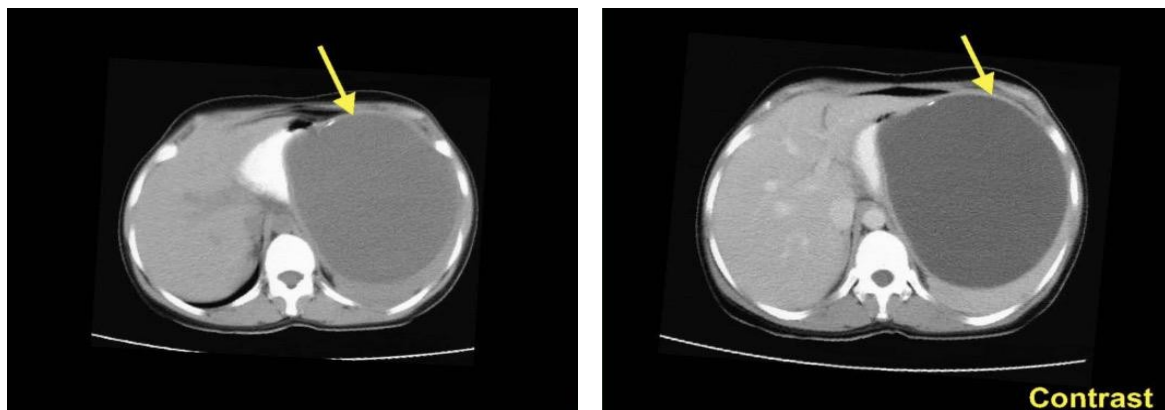


Findings – Hydatid cyst of paraspinal region with intraspinal extension eroding the vertebral body.



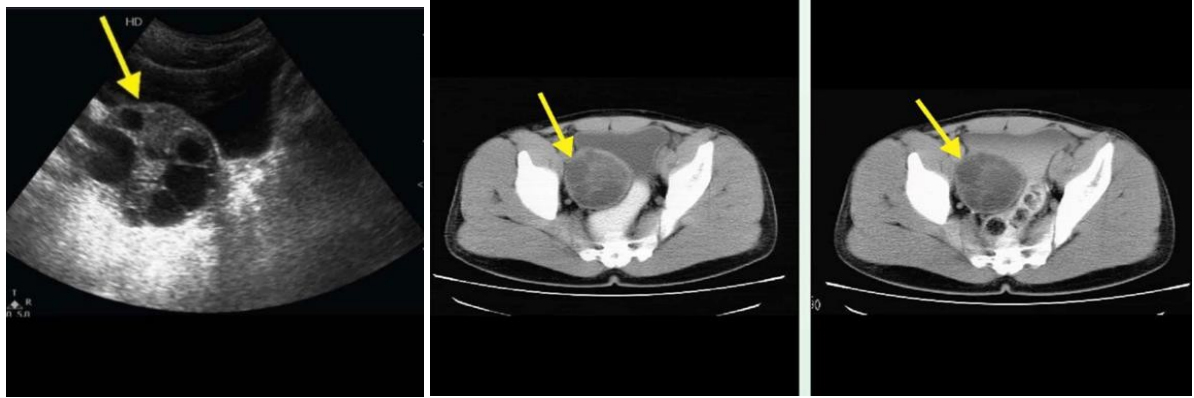
A well-defined expansile isointense to hypointense lesion on T1 and hyperintense on T2 lobulated lesion is seen more onto the left side of midline, paraspinal and epidural involving the lamina, pedicle transverse process of T6, T7 vertebrae and posterior end of 6th rib causing extradural cord compression displacing the cord anteriorly.

Case 5 : A 23 years old female came with complaints of pain in left hypochondrium. On examination there was a firm tender mass noted in left hypochondriac region extending upto the epigastric region.



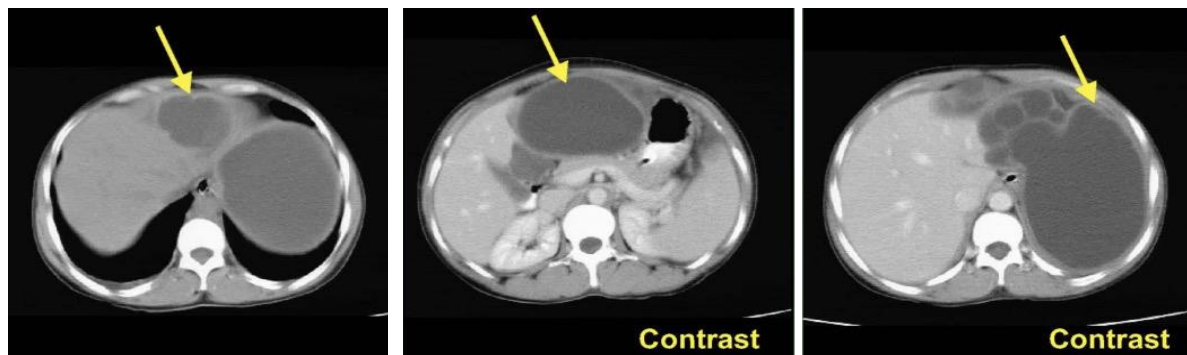
Findings – Hydatid cyst with peripheral wall calcification arising from spleen.

Case 6 : A 17 year old male presented with complaints of pain in lower abdomen and increased frequency of micturition.



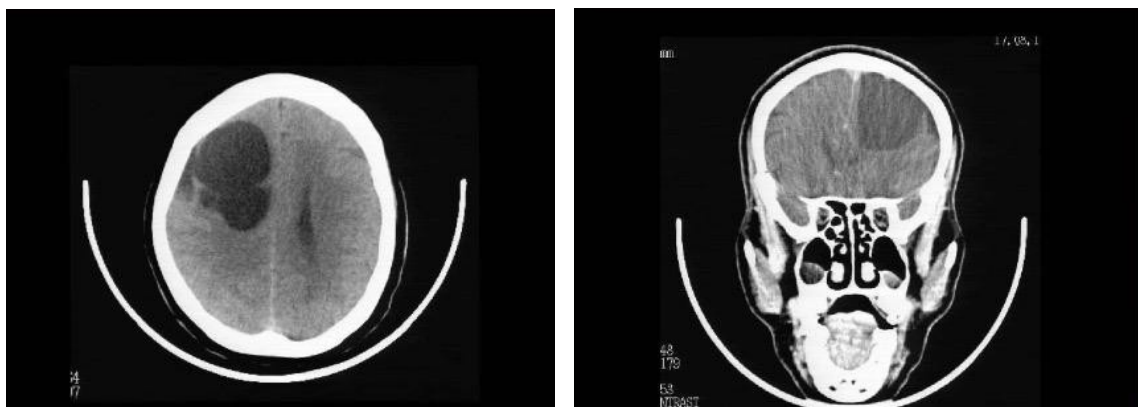
Findings – USG and CT scans show Hydatid cyst with internal Hydatid cyst in pelvis, posterior to the bladder with multiple septations and daughter cysts in it in pelvic region posterior to the bladder.

Case 7 : A 40 years old female presented with complaints of pain in abdomen with nausea, vomiting, fever, cough and chest pain and abdominal distension since one month.



Findings – Hydatid cysts with multiple daughter cysts with calcification and septae in between seen involving left lobe of liver, mesentry and omentum situated in right side of mid lower abdomen.

Case 8 : A 45 years old female came with complaints of headache of right side with generalised weakness since 2 months.



Findings – A well-defined lobulated sharply marginated cystic hypodense lesion is seen at right fronto-temporo-parietal lobe. The lesion contains septae in it. No evidence of calcification seen. The lesion is seen in continuity with extradural space on right side. There is mass effect on right lateral ventricle which is displaced to left side with contralateral deviation of left lateral ventricle.

Treatment overview – Percutaneous drainage with Albendazole therapy is safe and effective treatment for Hydatid cyst. PAIR – Puncture Aspiration Injection Reaspiration.

3. RESULT

Out of 20 patients, 8 patients had Hydatid cyst of liver and 4 patients had Hydatid cyst in lungs. In rest of the patients Hydatid cysts were found in unusual locations. The result suggests that the most common location for Hydatid cyst in humans is the liver followed by the lung. Majority of the patients were from rural areas. Upper abdominal swelling was the most common presenting feature. In our study CECT scan was done in most of the cases and it commendable diagnostic accuracy .

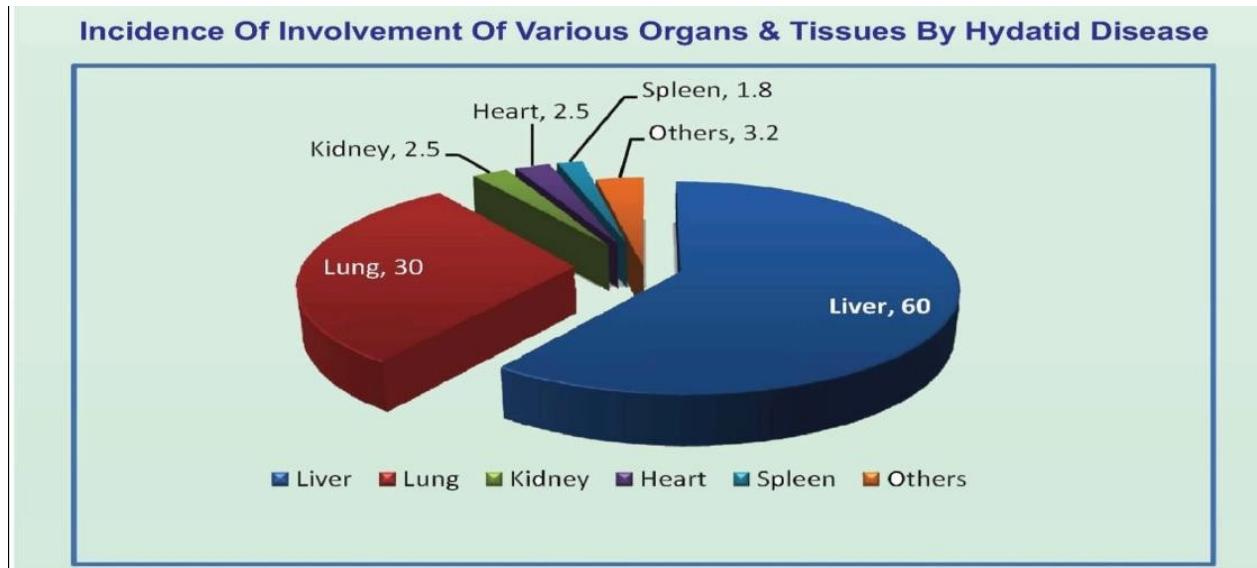


Figure 2 – Incidence of involvement of various organs and tissues by Hydatid disease

4. CONCLUSION

Involvement of sites other than liver and lungs by Hydatid disease is rare. Symptoms are related to size, location and possible complications of the cyst. It should be strongly suspected in differential diagnosis of all abdominal cysts especially in endemic areas. Proper surgical and medical management should be done to avoid any recurrences with regular follow up to detect any late complications such as local recurrence of the disease.