# A rare case report of hepatic yolk sac tumor in 4 years old child; Imaging, chemical and pathological findings

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## INTRODUCTION:

Yolk sac tumor is a type of malignant germ cell tumor most commonly occurring in the gonads with hepatic involvement being an extremely rare presentation. Hepatic yolk sac tumor is usually a diagnostic dilemma due to its rarity, non-specific imaging findings, and non-availability of specific laboratory markers. Diagnosis relies on histology due to nonspecific imaging and laboratory findings. Early diagnosis is crucial as the tumor is aggressive with rapid progression causing significant mortality.

## CASE PRESENTATION:

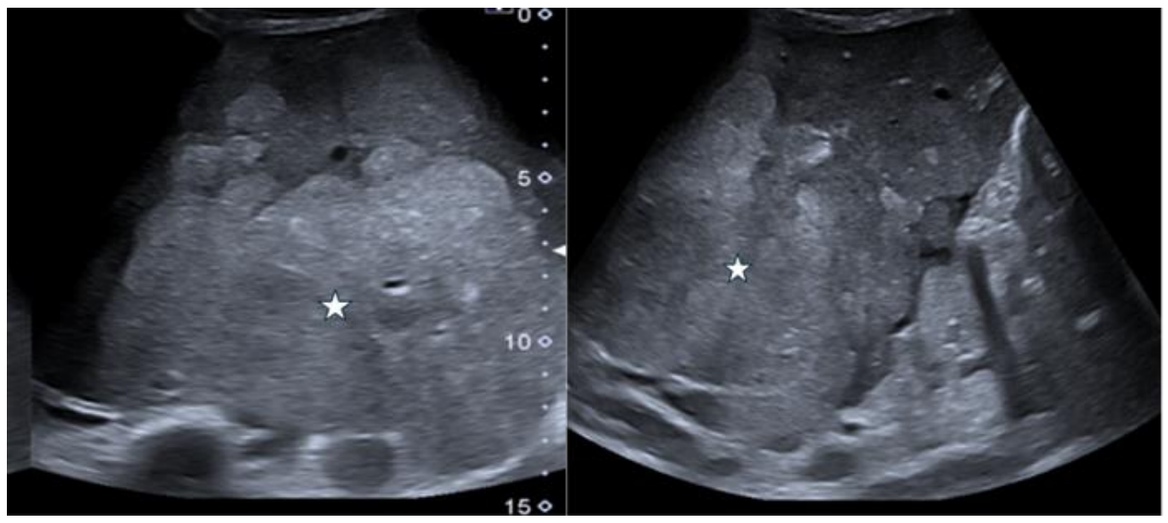
We report the case of a 4-year-old girl who was presented with abdominal pain and distension for 1 month. Ultrasound and CT were performed, and it was labeled hepatoblastoma. Biopsy turned out inconclusive and differentials of hepatoblastoma vs germ cell tumor were given. Laboratory findings showed alpha fetoprotein which is raised in both tumors. As these tumors have different treatments and prognosis, a re-biopsy was suggested. Re-biopsy confirmed the yolk sac tumor and chemotherapy was started which showed good response. Monthly follow up with AFP and LFTs was started. After a year, 3 months follow up for laboratory tests was started and again turned-out normal results. Finally, after 5 years post treatment with normal AFP, the patient was discharged from the hospital system.

## DISCUSSION:

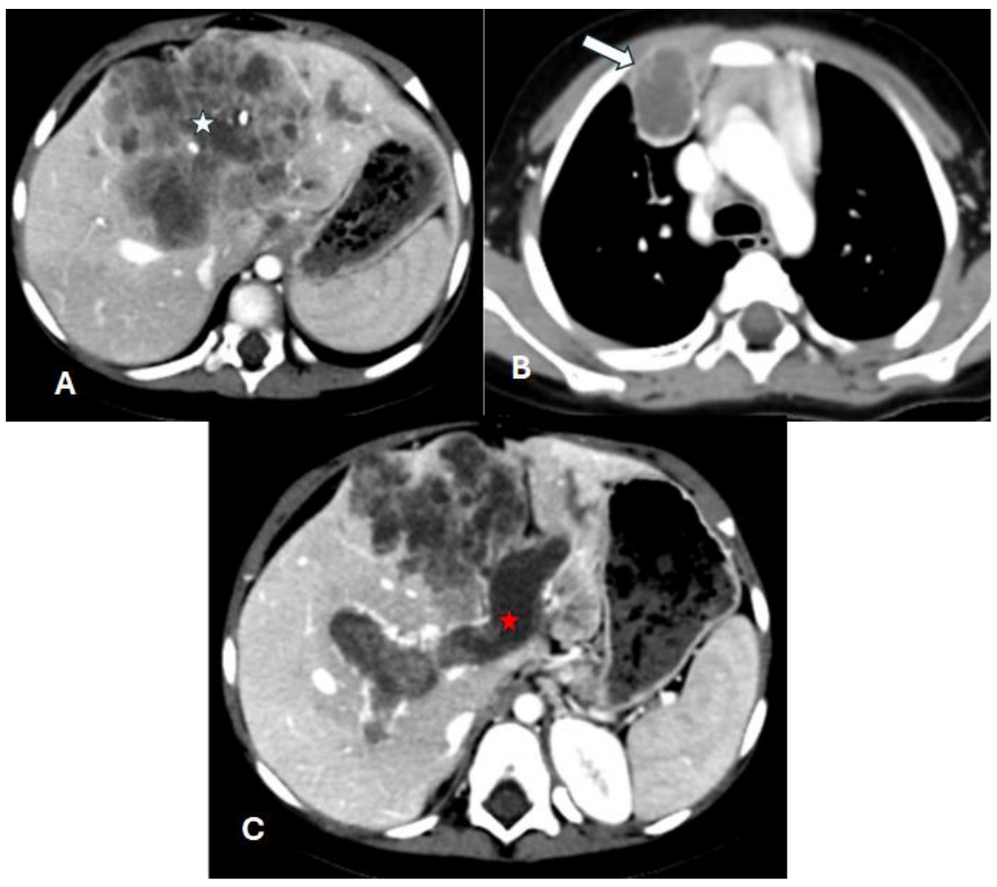
Hepatic yolk sac tumors are very rare and usually occur in young adults. Because of its rarity, it is usually not considered differential diagnosis and is misdiagnosed as hepatocellular carcinoma in adults while hepatoblastoma in children. It is important to differentiate hepatoblastoma and yolk sac tumors due to different therapeutic implications. Histologic confirmation is necessary to differentiate the two tumors. Early recognition, accurate diagnosis, and appropriate treatment strategies are essential for improving outcomes in such rare cases.

## CONCLUSION:

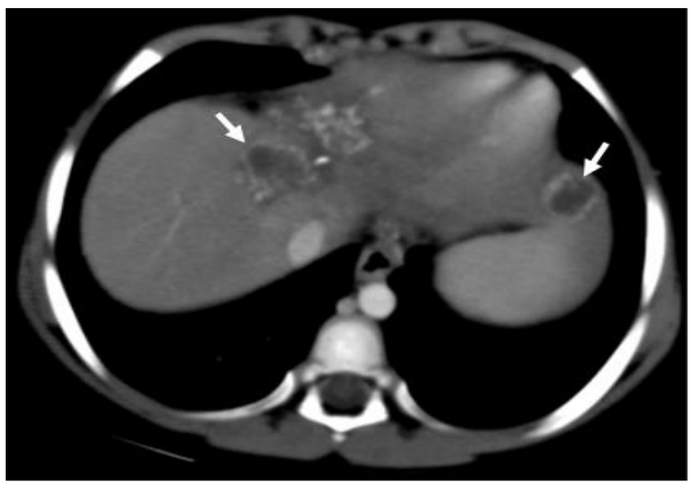
Primary hepatic yolk sac tumors, although rare, should be considered in differential diagnosis of hepatoblastoma. Due to nonspecific imaging and laboratory findings, histopathology should be considered to confirm the diagnosis due to differences in treatment regimens.



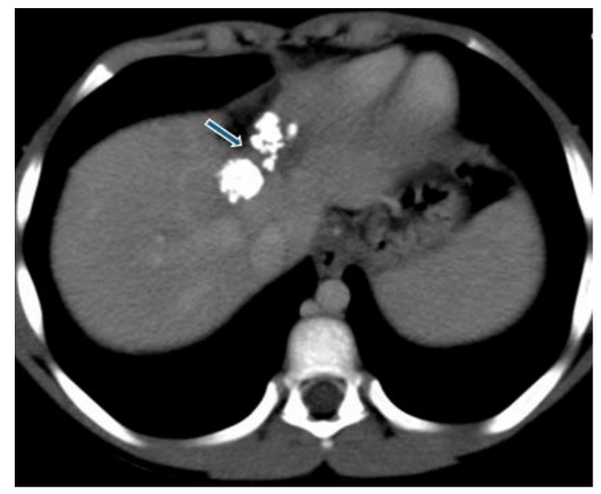

*Ultrasound images of the liver showing a large heterogeneous mass (star)*



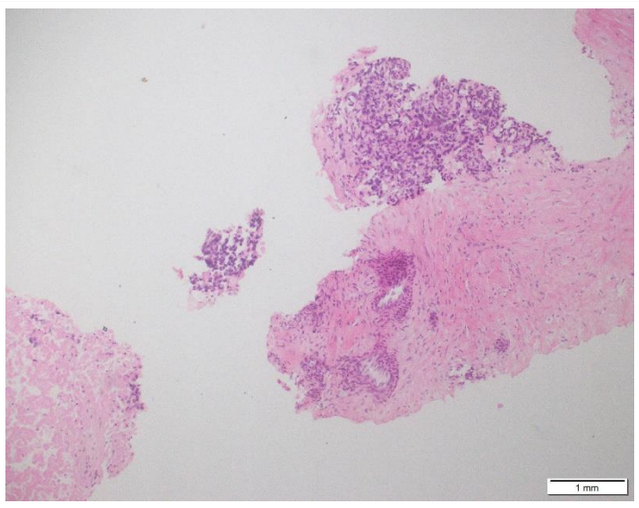

*CT scan showing a heterogeneously enhancing hepatic mass (Fig A star), enlarged internal mammary node (fig B arrow), and associated portal vein thrombosis (fig C star)*



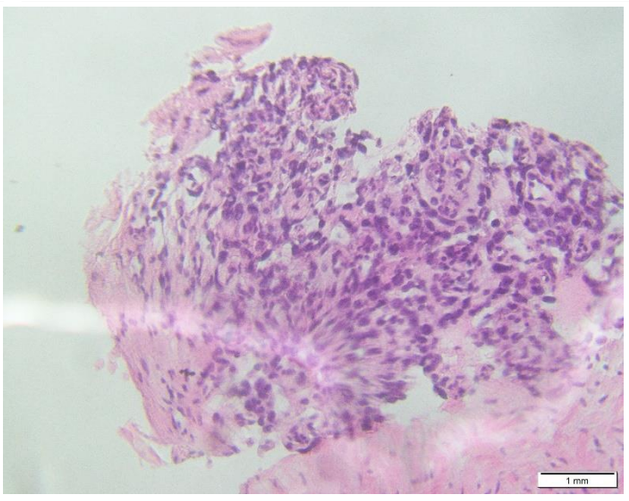
*Post chemotherapy response assessment scan showing significant interval reduction in mass*



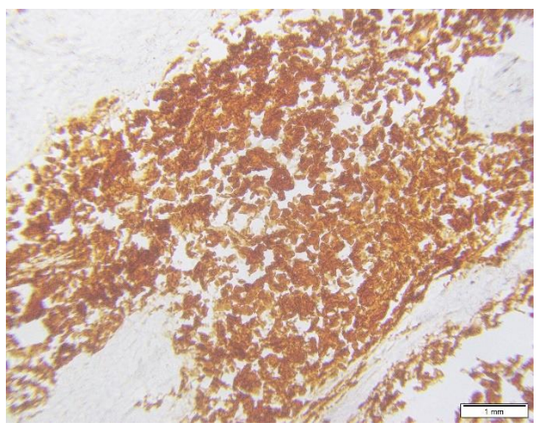
*Follow up CT scan showing almost complete resolution of mass by focal calcifications*



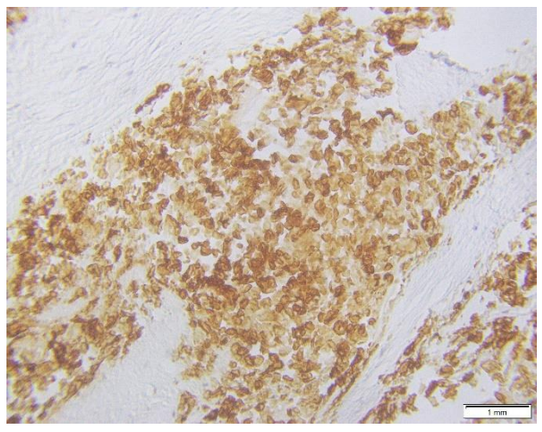

*A low power image showing nests of tumor cells with hyperchromatic, vesicular nuclei (H&E 10X).jpg*




*A high-power image showing Sheet of polygonal tumor cells with large vesicular or pyknotic nuclei with prominent nucleoli, brisk mitoses, clear to eosinophilic cytoplasm (H&E 20X).jpg*




*Diffuse expression of CYTOKERATIN(CK) in tumor cells..jpg*




*Diffuse expression of GLYPICAN3 in tumor cells..jpg*

DISCLOSURE: Nothing to disclose