

Mimicking Thyroid Malignancy: A Hydatid Cyst Managed Without Surgery

INTRODUCTION

Hydatid disease, or cystic echinococcosis (CE), is a parasitic zoonosis caused primarily by *Echinococcus granulosus*. In Pakistan, 1,611 cases were recorded between 1990 and 2018. Humans are infected by accidentally ingesting eggs through contact with the feces or fur of infected dogs, or through contaminated water and food.

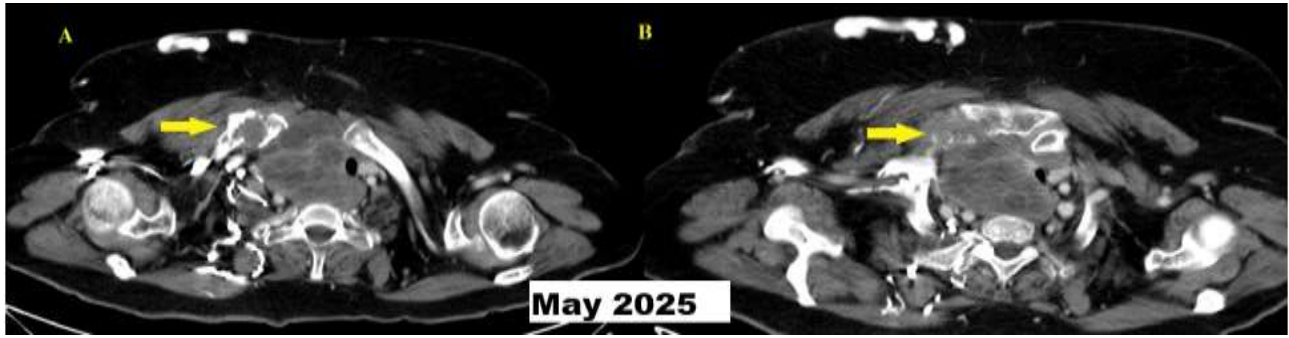
The liver (70%) and lungs (20%) are the most commonly involved organs. Head and neck or mediastinal hydatid disease without pulmonary involvement is unusual, with mediastinal involvement reported in 4.5-14% of cases [1,2]. Skeletal CE accounts for only 0.5-4% of cases.

CASE HISTORY

57-year-old woman from northern Pakistan with diabetes and hypertension. Painless, slowly enlarging right infraclavicular swelling with dilated chest-wall veins for 1 year. No constitutional or compressive symptoms. Surgery for "goiter" (25 y ago) and liver surgery (20 y ago); records unavailable. No known contact with dogs or cattle.

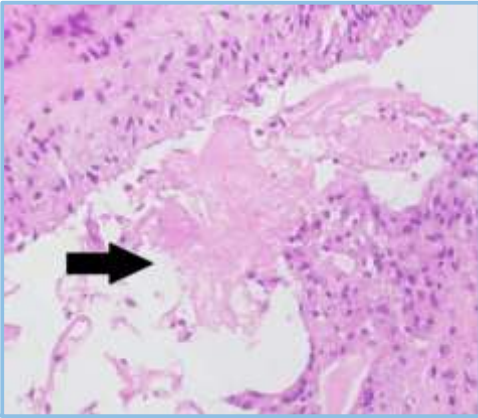
INVESTIGATIONS

- Labs: Eosinophils 11.9% (ref 0.5-6%); Echinococcus IgG 25.3 DU (positive >11)
- CT: Necrotic mass in superior mediastinum destroying the right sternoclavicular joint; tracheal narrowing; near-complete SVC occlusion; calcified liver lesions



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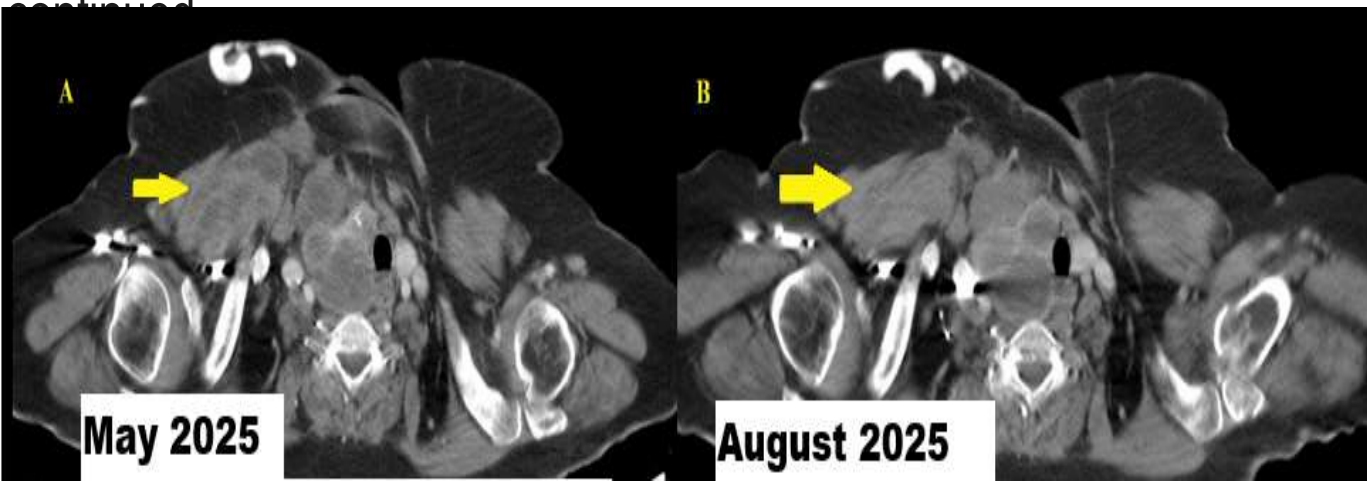
- Biopsy: Granulomatous reaction, giant cells, laminated membrane, consistent with ruptured hydatid cyst



Biopsy histopathology

MANAGEMENT & OUTCOMES

Surgery was not pursued (proximity to trachea, esophagus and superior vena cava; no severe pressure symptoms). Albendazole 400 mg twice daily (15 mg/kg/day) was started. At 12 weeks, CT showed resolution of the pectoralis major component, a stable mediastinal portion and unchanged liver calcification (partial response). No adverse effects; blood counts and liver tests normal. Treatment



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DISCUSSION

- Neck/mediastinal cysts or those with bony erosion are exceptional. [3,4]. In one study, only 24 out of 1,056 cases of hydatidosis (2.3%) were localized in the soft tissue [3].
- Surgical excision remains the treatment of choice for accessible cysts, aiming for complete removal without rupture [5]
- Cysts closely associated with critical structures, multiple cysts, or those with bony involvement may be unamenable to surgery and carry a high risk of morbidity. [6]
- Hydatid disease of the bone is less sensitive to albendazole than cysts at other sites, requiring higher dosage and long-term administration (years) [6]
- After 12 weeks of albendazole therapy, our patient demonstrated partial radiological resolution despite unfavorable prognostic features, supporting medical management in cases where surgical intervention is not feasible, but treatment remains indicated.

CONCLUSION

- Consider cystic echinococcosis in cystic masses from endemic regions, even at atypical sites and without animal exposure
- Inoperable cysts may respond to medical therapy alone; multidisciplinary care is key

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