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# A RARE PRESENTATION OF A GIANT HEPATIC HYDATID CYST MIMICKING MASSIVE PLEURAL EFFUSION: A CASE REPORT

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## ABSTRACT

**Background:** Hydatid disease, caused by Echinococcus granulosus, commonly affects the liver and lungs. Complications such as transdiaphragmatic extension are rare and may mimic primary pulmonary conditions. **Case Presentation:** A 72-year-old female with long-standing Type 2 Diabetes Mellitus and recently diagnosed Hypertension presented with acute worsening breathlessness and right upper quadrant abdominal pain. Clinical findings revealed a stony dull percussion note and complete absence of breath sounds over the right hemithorax, suggestive of massive pleural effusion. Laboratory investigations showed marked eosinophilia and an exudative eosinophilic pleural fluid. Ultrasound and CT imaging identified a large hepatic hydatid cyst measuring 15.3 × 10.7 cm with associated massive right-sided pleural effusion. **Discussion**: The respiratory-dominant symptoms led initially to a misdiagnosis of primary pleural effusion. However, the presence of eosinophilic pleural fluid and a palpable hepatic mass redirected suspicion towards hydatid disease. Transdiaphragmatic extension and immunologically mediated sympathetic effusion are known but uncommon complications. **Conclusion**: Hydatid disease should be considered in elderly patients presenting with combined hepatic and thoracic symptoms, particularly in the presence of eosinophilic pleural effusion. Early recognition and multidisciplinary management are essential.

**KEYWORDS:** Hydatid cyst; Echinococcus granulosus; Eosinophilic pleural effusion; Hepatic cyst; Sympathetic effusion.

## INTRODUCTION

Hydatidosis represents a significant parasitic infection in endemic regions, caused predominantly by Echinococcus granulosus. The liver is involved in nearly three-quarters of all cases. While most hepatic hydatid cysts remain asymptomatic, complications such as cyst enlargement, rupture, or migration across anatomical boundaries may dramatically alter clinical presentation. Transdiaphragmatic extension of hepatic hydatid cysts into the pleural cavity is rare and can mimic primary pulmonary disease, posing diagnostic challenges.

## CASE PRESENTATION

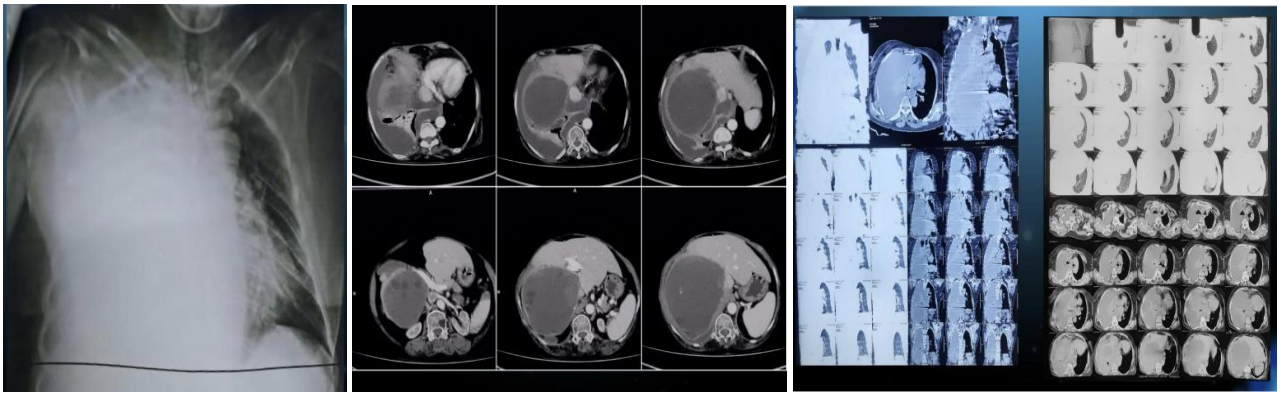
A 72-year-old female with Type 2 Diabetes Mellitus (15 years) and newly diagnosed Hypertension presented with a 7-day history of progressive breathlessness (MMRC Grade 3 to Grade 4) and pricking right upper quadrant abdominal pain. The patient denied radiation or positional variation.

### Clinical Examination

- Respiratory rate: 32/min
- Blood pressure: 160/100 mmHg
- $SpO_2$: 94% on room air
- Trachea deviated to the left
- Right chest: stony dull percussion, absent breath sounds
- Abdomen: palpable tender nodular mass 4 cm below right costal margin

**Laboratory Findings**
Peripheral eosinophilia (15%), ESR 101 mm/hr, exudative eosinophilic pleural fluid (protein 5.3 g/dL, 2000 cells/cm³). LDH was elevated (967 U/L), but liver enzymes were within normal limits.

**Imaging**: Ultrasound showed a large hypoechoic cyst in the right hepatic lobe (15.3 × 10.7 cm). CT confirmed a giant hydatid cyst with associated massive right pleural effusion.



## DISCUSSION

Hydatid disease should be strongly suspected in patients from endemic areas presenting with cystic hepatic lesions and eosinophilia. This case was initially misleading due to respiratory‑dominant symptoms suggestive of massive pleural effusion. The presence of a palpable hepatic mass and eosinophilic pleural effusion pointed toward a parasitic aetiology.

Pleural involvement in hydatid disease arises through:

1. Direct rupture into pleural cavity
2. Transdiaphragmatic extension, as seen in this patient
3. Immune‑mediated sympathetic effusion

Eosinophilia in blood and pleural fluid further supports parasitic sensitisation. The diagnosis was confirmed through imaging. Early multidisciplinary cooperation—General Medicine, Thoracic Medicine, General Surgery, and Surgical Gastroenterology—is vital to prevent complications such as rupture, infection, or anaphylaxis.

## CONCLUSION

This case illustrates a rare presentation of hepatic hydatid disease mimicking massive pleural effusion. Clinicians must maintain a high index of suspicion, especially in patients with eosinophilic pleural effusion and hepatic cystic lesions. Early diagnosis and coordinated management significantly improve outcomes.

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