

DELAYED RECOGNITION OF METASTATIC OVARIAN CARCINOMA IN MIXED CONNECTIVE TISSUE DISEASE: A RARE CASE REPORT



Abstract
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Introduction

Mixed connective tissue disease (MCTD) is a rare systemic autoimmune disorder characterized by high titers of anti-U1-snRNP antibodies. While autoimmune diseases generally increase the risk of malignancy through chronic inflammation and immune dysregulation, ovarian carcinoma is an exceptionally rare complication in MCTD. Interrelated clinical features of autoimmune disease, medication toxicity, and malignancy may create significant diagnostic uncertainty, particularly in resource limited settings where access to advanced investigations is restricted.

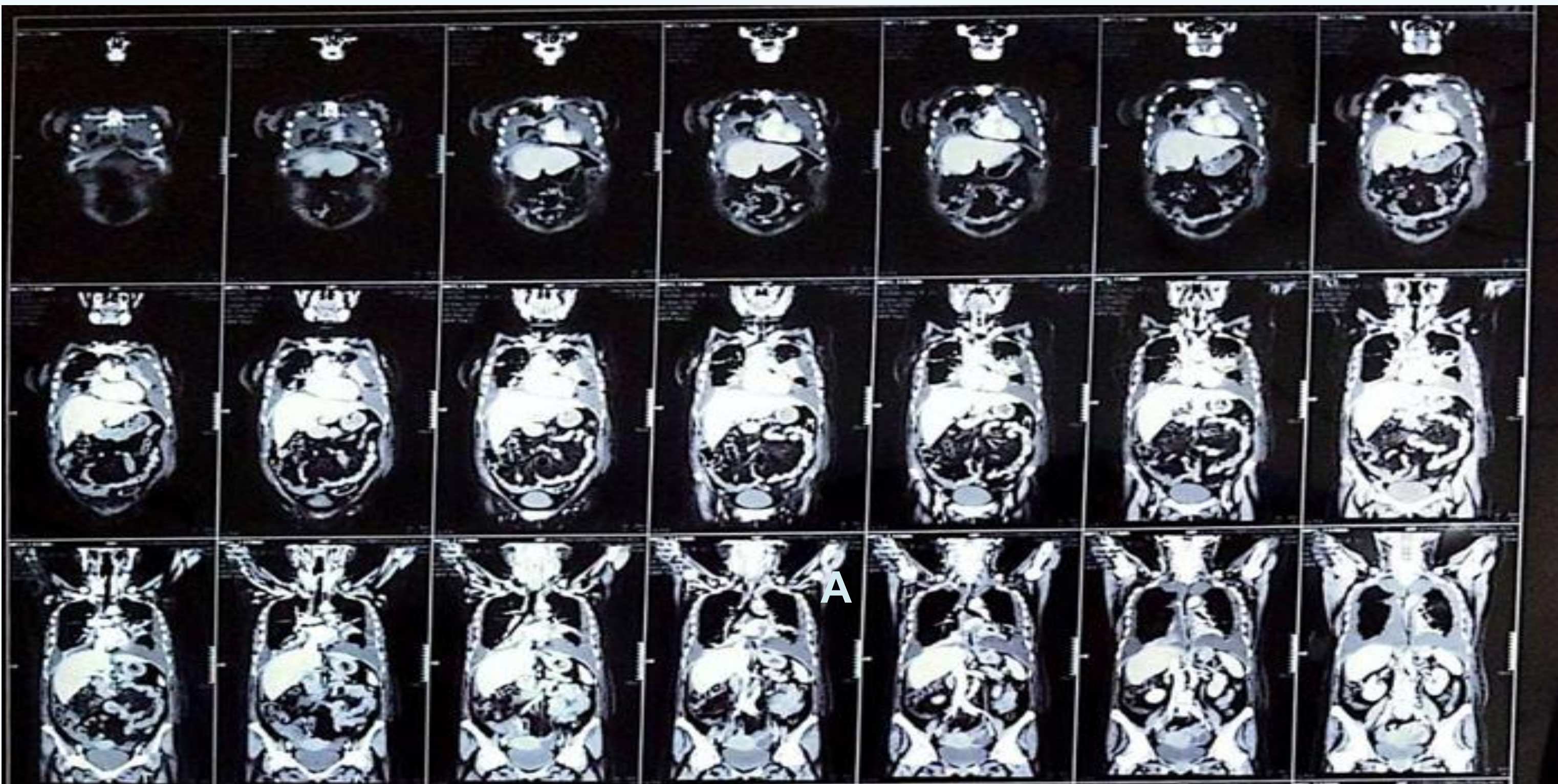
Case Report

A 35-year-old woman who was a known case of MCTD for last two years, presented with progressive shortness of breath, pleuritic chest pain, bilateral pleural effusions, weight loss, anorexia, and functional decline. She reported visiting a primary care center for SOB and pleuritic chest pain 6 months ago, where her symptoms were linked to methotrexate-induced pulmonary toxicity or MCTD-related pleuropulmonary involvement, resulting in modification of immunosuppressive therapy without comprehensive evaluation. Due to delayed expert follow-up, financial difficulties, and partial symptom recovery, proper clinical evaluation was postponed for almost six months. Currently, malignant pleural effusion, ovarian masses and widespread skeletal metastases was confirmed by subsequent investigations, leading to diagnosis of advanced ovarian carcinoma. The patient received multidisciplinary care and systemic chemotherapy; however, her metastatic disease progressed quickly, resulting in her death 26 days after presentation. Timely multidisciplinary evaluation and early cytological confirmation of the unexplained pleural effusion could have resulted earlier diagnosis and better clinical outcomes.

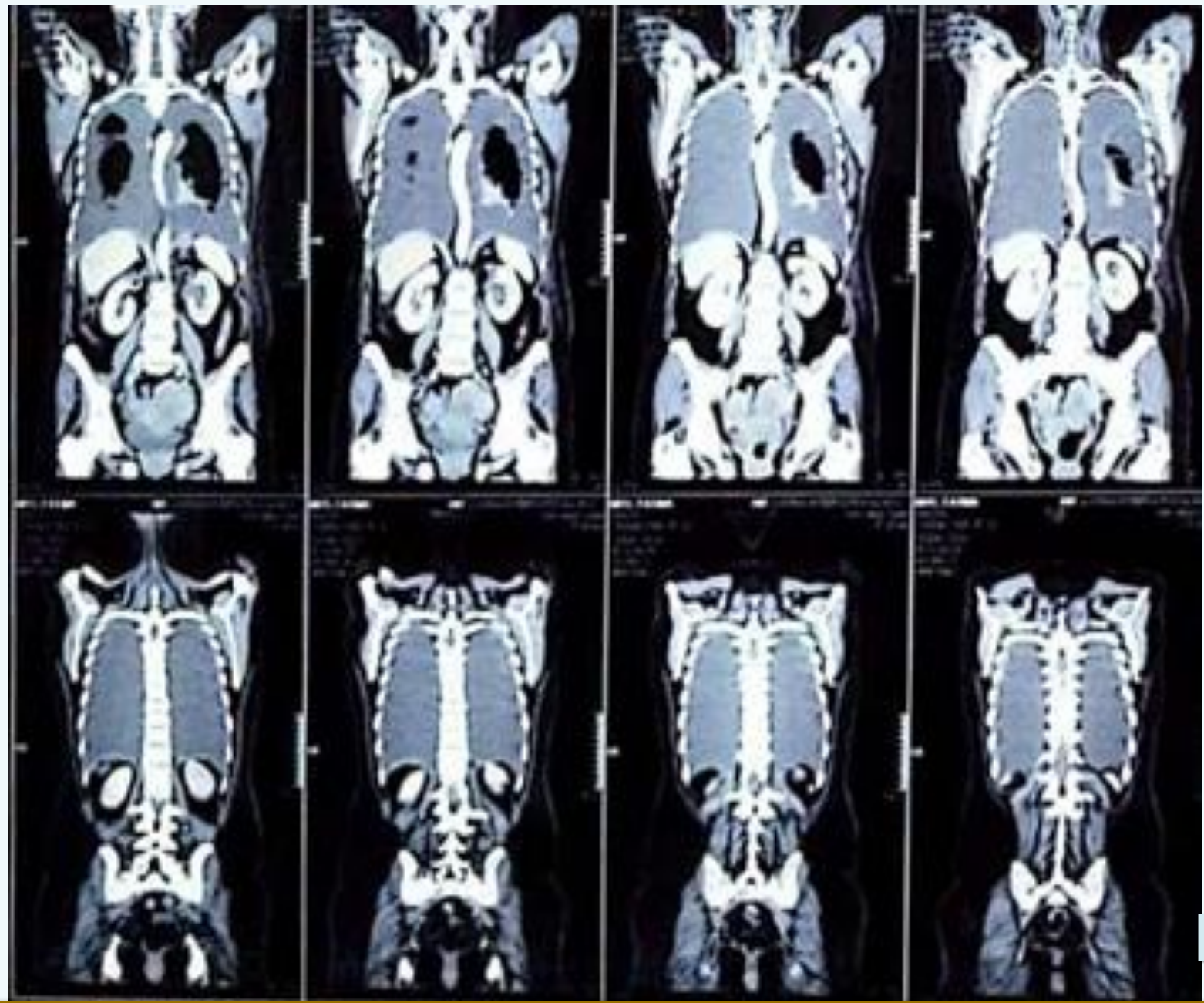
Clinical Timeline

Time frame	Event
Day 1	A 35-year-old presented with an intermittent, high-grade fever for 3 weeks. On examination, an early blowing diastolic murmur was heard.
4 months ago	Hx of RTA and subsequent extensive maxillofacial surgery
Shortly after the presentation	Laboratory workup revealed elevated inflammatory markers and D-dimer levels. Echocardiography identified a BAV, a small, mobile vegetation, and mild-to-moderate aortic regurgitation. Two sets of blood cultures were sent, one hour apart.
Initial Treatment	Empirical therapy with IV Vancomycin and Gentamicin initiated.
Day 3	Blood culture showed growth of B. cepacia complex.
Diagnosis	Infectious Endocarditis (updated 2023 Duke-ISCVID criteria).
Following diagnosis	Antimicrobial therapy was adjusted according to the sensitivity profile.
Day 6	experienced an acute ischemic stroke; however, a complete neurological recovery was achieved due to timely intervention.
Subsequent course	marked by persistent fevers and unabated inflammatory response.
Shortly thereafter	referred to a higher specialized center for surgical intervention, in the view of failed medical therapy.
Day 11	elective valve replacement surgery was performed
Follow-up visits	Remained clinically stable, with no post-surgical complications.

Radiography & Echocardiography



The scan reveals foci of abnormal increased radiotracers uptake in vault of skull, sternum, bilateral rib cage, bilateral scapulae, bilateral humerii, spine at multiple levels, pelvic bone and bilateral femora bone scan findings are suggestive of extensive osseous metastases



Laboratory Profile

Test Name	Result
Test Name	Result
Hemoglobin	8.71 g/dL
Platelets	160 ×10 ³ /μL
WBCs	7.59 ×10 ³ /μL
CRP	37 U/L
ESR	Not reported
RA Factor	Positive +ve
Serum Creatinine	Not reported
ALT	18.4 U/L
AST	Not reported
Total Bilirubin	0.175 mg/dL
MP	Not seen
Urine Analysis	Specific gravity 1.014; pH 6.3; leukocytes, nitrite, protein, glucose, ketone and blood: Negative; WBCs 4-6/HPF, RBCs 1-2/HPF, epithelial cells 8-10/HPF

Conclusion

This case demonstrate how diagnostic overshadowing by a pre-existing autoimmune disorder can delay recognition of an aggressive malignancy and expands limited literature on ovarian carcinoma in patients with MCTD. It highlights the critical importance of maintaining a high index of suspicion for hidden malignancy whenever the clinical course changes from typical autoimmune patterns. Patient outcomes may improve by earlier recognition and comprehensive evaluation of such cases.

Written Consent - Obtained | Ethical Approval – Not Applicable | Funding: none | Conflicts of interest: none declared

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