

## CASE REPORT

## MIMICKING LYMPHADENOPATHY

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## ABSTRACT

Among patients with malignancy of uterus, breast, stomach, lungs or lymphomas, Sarcoid-like granulomas can often occur. Some tumours like Hodgkin lymphoma (HL) and non-Hodgkin lymphoma have shown such reactions. In parallel, HL is widely distorted by cell-mediated immunity, so immunodeficiency can lead to infections, mainly viral infections due to Epstein-Barr virus, herpes virus, cytomegalovirus and species of Mycobacterium infections like tuberculosis could manifest.

**KEY WORDS:** Lymphadenopathy; Lymphomas; Granulomas; Hodgkin Lymphoma; Non-Hodgkin Lymphoma; Epstein-Barr Virus; Cytomegalovirus; Tuberculosis.

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## INTRODUCTION

Among patients with malignancy of uterus, breast, stomach, lungs or lymphomas, Sarcoid-like granulomas can often occur. Some tumours like Hodgkin lymphoma (HL) and non-Hodgkin lymphoma have shown such reactions. In parallel, HL is widely distorted by cell-mediated immunity, so immunodeficiency can lead to infections, mainly viral infections due to Epstein-Barr virus, herpes virus, cytomegalovirus and species of Mycobacterium infections like tuberculosis could manifest.<sup>1,2</sup>

A simultaneous picture of two separate diseases i.e. Hodgkin lymphoma with tuberculosis can be seen in unusual cases.<sup>3</sup> Differential histopathological diagnosis may be a challenging task, and additional immunohistochemical tests and also serological and microbiological testing are needed to find the cause.

## CASE REPORT

A 22-year-old female with complaints of advanced cervical and supraclavicular swellings for three months was admitted. Significant fatigue, tiredness, evening sweats and approximately 10 kg weight loss were also reported by the patient. CT chest showed many enlarged lymph nodes in bilateral cervical, prevascular, paratracheal, paraaortic, subcarinal,

aortopulmonary, and axillary group of lymph nodes with largest measuring 20\*18 mm in right axillary region, and had a normal lung parenchyma. Ultrasound neck showed multiple conglomerated lymph nodes in level III, IV, VII on right and left side with loss of central fatty hilum with largest measuring 29\*13 mm at level IV and suggested to correlate with histopathology report. The cervical lymph node on the right side was excised by surgery and evaluated histopathologically as we suspected the patient to have tuberculosis.<sup>2</sup>

The patient initially while getting admitted complained of generalised weakness, fatigue, and loss of appetite. Physical examination showed peripheral lymphadenopathy in cervical, supraclavicular and axillary regions. Liver and spleen were of normal size. Auscultation of the lungs showed normal vesicular breath sounds. Laboratory tests showed WBC 12640 cells/cumm with neutrophilic leucocytosis with shift to left up to metamyelocyte, platelets 6.83 lakh/cumm showing thrombocytosis, red blood cell count showing erythropenia with hemoglobin levels 5.6 g/dl, bilirubin increased to 2.5mg/dL (direct 1.9 mg/dL), alkaline phosphatase 303 IU/L, serum protein 3.1, serum globulin 4.6, A/G ratio was reversed to 0.7. LDH increased to 273, reticulocyte index was decreased to 1.2, Coombs test was negative, anti-dsDNA, ANA were negative, HbsAg, HIV I/II, anti HCV were negative. CECT abdomen showed mild hepatomegaly, mild ascites with few paraaortic lymph nodes. Histopathological assessment showed erasure of the architecture of the full lymph nodes by nodules of neoplasia, a small number of collagen bands with birefringence, many granulomas that are non-caseating, along with dispersed Langhans giant cells, and also granulomas with focal necrosis of the core and neutrophil presence. Polymorphous cell population comprising of mature

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lymphocytes, plasma cells, and eosinophils were seen among which numerous mononuclear and binuclear Reed-Sternberg cells expressing CD15, CD30, PAX-5, and EBV-LMP. The cells were immune-negative for CD3, CD20, and CD45. Acid fast test, gene Xpert test of the lymph node were found to be negative for tuberculosis. The final histopathological report underlined the need of performing other supplemental tests to exclude the coexistence of tuberculosis and Hodgkin lymphoma.<sup>1</sup>

The test results confirmed the presence of classical Hodgkin lymphoma with mixed cellularity. The patient was given three courses of chemotherapy following which the patient's condition improved dramatically. On physical palpation examination of the supraclavicular and cervical lymph nodes, the size and number were found to be decreasing. Labs showed normal total count and platelets. Anaemia improved with haemoglobin 9.9 g/dL. The patient was stable at two months follow up.

## DISCUSSION

Lymphadenopathy is seen commonly and sometimes even with no other complaints. In a developing country like India, tuberculosis is the most common differential diagnosis but we have studies showing almost half the cases of lymphadenopathy are due to non-tuberculosis causes like malignancy, non TB infections, autoimmune, drugs, sarcoidosis, hypothyroidism, cystic fibrosis etc. So detailed evaluation of the lymphadenopathy by histopathology, immunochemistry, and microbiological examination of the biopsy is essential.<sup>1</sup> If there is an inconclusive case, then lymphoma has to be ruled out. A retrospective study shows that lymphoma has not

uncommonly being misdiagnosed as TB.<sup>4</sup> Lymphoma and TB can share a lot of symptoms like anorexia, weight loss, sweating, anaemia and radiological findings. Sometimes in rural settings a trial of anti TB is given and monitored. Improvement in the patients symptoms will be diagnosed as culture negative tuberculosis; and a poor response will be seen in cases of malignancy, causing delay in diagnosis. So detailed evaluation of lymphadenopathy is needed to avoid any delay in diagnosis of lymphoma and improve the prognosis for the patient.<sup>5</sup>

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## CONFLICT OF INTEREST

Authors declare no conflict of interest.

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## AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design:	AM
Acquisition, Analysis or Interpretation of Data:	AM, PM
Manuscript Writing & Approval:	AM, PM

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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