



## Tuberculous Lymphadenopathy in Renal Cell Carcinoma: A Case Report

Authors

**Dr Mohammed Hidayathullah Khan<sup>1</sup>, Dr Mohammed Hidayath Hussain<sup>2</sup>,  
Dr Hina Afreen<sup>3\*</sup>**

<sup>1</sup>MS,FRCS (Urology), Consultant Tawam Hospital AL AIN UAE.

<sup>2</sup>Prof and HOD, Dept. of Pulmonary Medicine, Dr. VRK Womens Medical College

<sup>3</sup>Senior Resident, Dept. of Pulmonary Medicine, Shadan Institute of Medical Sciences

\*Corresponding Author

**Dr Hina Afreen**

### Abstract

*Lymph node enlargement in cancer patients often directs to a metastatic disease leading to unnecessary lymph node dissection. But in developing countries, where tb is very prevalent, any lymph node enlargement specially in immunocompromised patients should warrant us to investigate further before dissection and rule out tb in tb endemic countries. Tuberculous lymphadenopathy in cancer patients is increasing in number. Lymphadenopathy is the most common form of extrapulmonary lymphadenopathy and cervical lymph node enlargement if the most common site. there is limited literature on this aspect of inflammatory lymphadenopathy and radiologically enlarged lymph nodes in cancer patients. Here we present a case of cervical lymphnode enlargement in patients of renal cell carcinoma .*

**Keywords:** tuberculosis, renal cell carcinoma, extra pulmonary TB.

### Introduction

Peripheral lymph node involvement is the most common form of extrapulmonary mycobacterial disease as per the literature and also in our day to day practice and the cervical region is the most frequently affected site amongst the extra pulmonary lymphadenopathy<sup>(1-3)</sup>. Mycobacterial lymphadenitis has plagued humanity since the very ancient times and in the present era, Mycobacterium tuberculosis [Mtb] is the most common cause of mycobacterial lymphadenitis when compared to non-tuberculous mycobacteria. Lymph node Tb accounts for 35% of all the Extra pulmonary tuberculosis cases noted<sup>(4)</sup>. Most often ,TB lymphadenitis is considered to be the local

manifestation of a systemic disease. Significant lymphadenopathy in renal cell carcinoma (RCC) is often considered an important poor prognostic factor as it indicates the immunocompromised status of the person<sup>(5)</sup>.

Surprisingly, there is limited literature on this aspect of inflammatory lymphadenopathy. Often radiologically enlarged lymph nodes in cancer patients are conventionally thought synonymous with metastatic disease and treated accordingly. Such patients may be posted for unwarranted lymph-node dissection and the result of this unwanted dissection often results in pathologic node negative pN0 disease on histopathologic examination.

Finding tubercular lymphadenopathy after radical nephrectomy for cancer is exceptionally rare and here we present such a rare case.

### Case Report

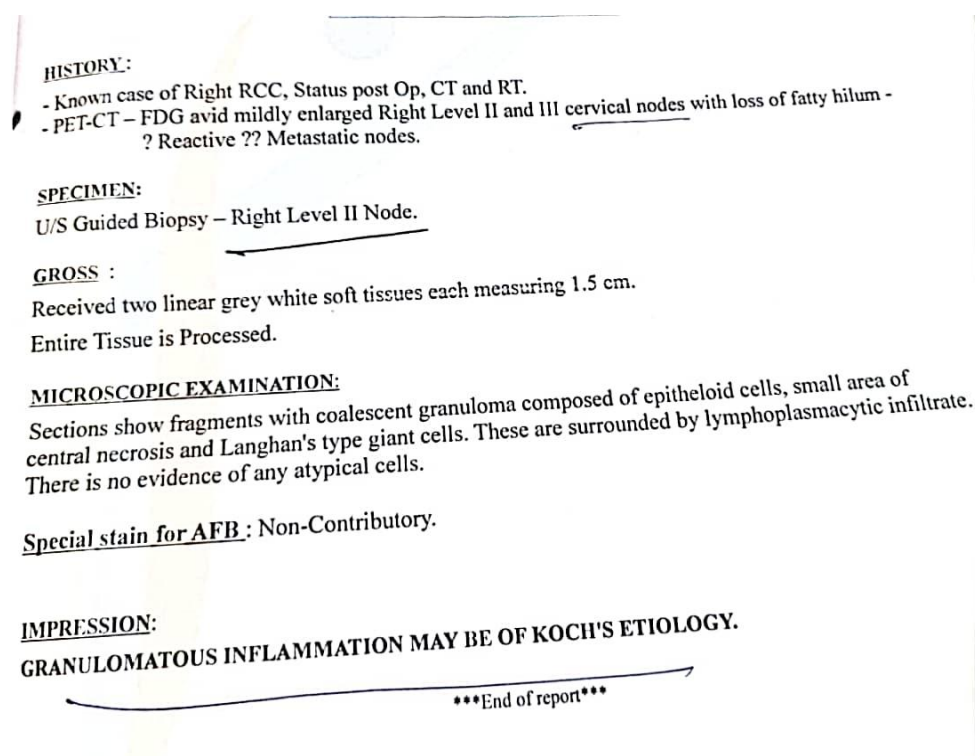
This is a case of 79 year old male who is a known case of renal cell carcinoma and has now come with complaints of fever since 3 weeks, weakness and swelling in the right cervical region. The swelling was present since 1 months, gradually increasing in size, present size being around 2\*2 cms, firm, matted with no discharge and mild tenderness was present on palpation.

On further evaluation, pt is currently undergoing chemotherapy and radiotherapy cycles for the renal carcinoma for which he was operated a few months back. He is cachectic in appearance. He

has no history of any comorbidities or any history of previous tuberculosis or contact with the patient.

Pt was in a stable condition, vitals all within normal limits except for temperature being around 101F,. A detailed investigation of blood parameters and evaluation of swelling has been done. A full body PET Scan done 2 months back did not show any evidence of lymphadenopathy but a ultrasound neck scan done now showed matted lymph nodes and FNAC from these right level II cervical lymph nodes showed granulomatous lymphadenopathy suggestive of Kochsetiology.

As his blood parameters, including liver function tests and renal function tests were normal, he was started on anti-tuberculous treatment.



### Discussion

The association of TB with carcinoma was initially described 200 years ago by Bayle who considered tb in cancer patients as one of various types and often referred to it as 'cavitation cancerous'.<sup>10</sup>

Primarily, Inflammatory lymphadenopathy in cancer patients is an obvious outcome of activation of innate and adaptive immune

responses of the patient to control tumour progression. The adaptive immune response to tumours is directed against tumour-associated/tumour-specific antigens expressed specifically by the tumour. Secondary, enlarged lymph nodes in cancer may also be a result of secondary infections and inflammatory reaction to tumour necrosis.<sup>(6)</sup>

Cases have been reported from developing countries where markedly enlarged retroperitoneal lymph nodes in patients of RCC turned out to be tubercular on histopathologic examination when often misdiagnosed as metastasis<sup>(7)</sup>

Falagas *et al.*<sup>(8)</sup> elaborated that the malignancy can mimic, follow or co-exist with tuberculosis in a wide range of clinical scenarios. They have noted that palpable lymph nodes due to tuberculous lymphadenitis may lead to over staging in the TNM system.

Metastasis is found in 20% to 30% of patients with renal cell carcinoma<sup>[9]</sup>. The 60% of the metastatic renal cell carcinomas present with lymph node involvement, out of which 50% have concurrent distant metastasis<sup>[10,11]</sup>.

Patients with bacterial lymphadenopathy habitually presents with constitutional symptoms of malaise, fever and loss of weight and generally respond to appropriate treatment with antibiotics. B-symptoms are commonly seen among cancer patients like lymphoma patients, whereas metastatic head and neck carcinoma patients presents with associated skin lesions or ear, nose or throat symptoms.

Assessment of cervical masses has been recently accompanied by fine-needle aspiration cytology (FNAC) owing to its high sensitivity and specificity as a reliable diagnostic tool. For countries like India, Bangladesh, Malaysia, where TB cases are discovered on a day-to-day basis, granulomatous changes in combination with caseous or coagulative necrosis are highly suggestive of tuberculosis<sup>[12]</sup>

Challenge in managing cervical tuberculous lymphadenitis is that there is no clear guide for assessment of extrapulmonary TB following treatment. Additionally, post completion of treatment, residual lymph node can be observed in nearly 15%–30% of patients. Residual lymph node may not necessarily indicate treatment failure and may be following a paradoxical reaction. Hence, close monitoring of the lymph node is crucial on weather microbiological testing is needed following a short-term observation. The

treatment in the cases of tuberculous lymphadenitis should be for 12 months to avoid chances of relapse and to ensure complete recovery.

This experience taught us that extensive lymphadenopathy associated with renal cell carcinoma on imaging does not necessarily signify metastatic disease, especially in our country, where tuberculosis is rampant.

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