

## Case Report

**A challenging diagnosis of pyrexia of unknown origin: isolated iliac tuberculous lymphadenitis complicated by psoas abscess.**WKMNU Wanniarachchi<sup>1\*</sup>, WRAM Pemasiri<sup>1</sup>, CL Munagama<sup>1</sup>, AGH Sugathapala<sup>1</sup>, MNN Masaima<sup>1</sup><sup>1</sup> Colombo South Teaching Hospital, Kalubowila, Sri Lanka.**Abstract**

Pyrexia of unknown origin is a challenge in clinical practice. Extrapulmonary tuberculosis is considered a common cause for pyrexia of unknown origin which has a wide spectrum of clinical manifestations, culminating in delayed diagnosis. However, due to its treatable nature and good prognosis, a high index of suspicion is needed to diagnose atypical presentations. This case report elaborates isolated involvement of iliac lymph node in tuberculosis which is a rare presentation of tuberculous lymphadenitis.

**Keywords:** Pyrexia of unknown origin, Tuberculosis, Extrapulmonary TB, Lymphadenitis, Psoas abscess**Copyright:** © 2021 Wanniarachchi WKMNU *et al.*  This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.**Funding:** None**Competing interest:** None**Received:** 27.04.2021**Accepted revised version:** 08.06.2021**Published:** 15.08.2021\* ✉ Correspondence: [nayanamaliuw@gmail.com](mailto:nayanamaliuw@gmail.com) <https://orcid.org/0000-0003-4251-5494>

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**Introduction**

Tuberculosis (TB) is one of the leading causes of morbidity and mortality worldwide and is considered a common aetiology in evaluating pyrexia of unknown origin [1,2]. Fever is the main manifestation in 60-85% of pulmonary TB and 30-35% of extrapulmonary TB. However, the diversity of its presentation makes the diagnosis challenging [1,2]. We present a case of isolated iliac TB lymphadenitis (TBL) complicated with a psoas abscess, diagnosed in a patient presented with pyrexia of unknown origin (PUO).

**Case report**

A 57-year-old previously healthy, immunocompetent lady presented with constitutional symptoms for two months and a significant weight loss of 7 kg over one month. She didn't have symptoms suggestive of a respiratory, urinary, gastrointestinal, or gynaecological source of infection. She was clinically euthyroid and had no associated skin rashes, features of connective tissue

diseases, or high-risk sexual behaviours. General examination was unremarkable except for glossitis. Her body mass index was 20 kg/m<sup>2</sup>. Respiratory, cardiovascular, abdominal, and neurological examination was normal. Initial biochemical and radiological investigations including serum procalcitonin, erythrocyte sedimentation rate (ESR), Mantoux test, chest x-ray, and the ultrasound scan of abdomen and pelvis were normal apart from normochromic-normocytic anaemia with a haemoglobin of 100 g/L. Two weeks later, following a new-onset right side inguinal pain, a repeat ultrasound scan of the abdomen and pelvis was done, which showed few reactive lymph nodes (LN). Contrast-enhanced computed tomography scan (CECT) showed low-density areas along the right common iliac and external iliac vessels suggestive of inflamed LNs with the maximum size being 1.5 cm. The smaller size of the nodes warranted ultrasound-guided, wire-localized, mini-laparotomy to obtain LN samples. Biopsy of the right-side external iliac node showed granulomatous

inflammation with caseation and a positive acid-fast-bacilli (AFB) test suggestive of *Mycobacterium tuberculosis*. Following these investigations, the diagnosis was confirmed as isolated iliac TBL. Anti-TB therapy was withheld after five days of initiation due to isolated transaminitis following standard quadruple therapy. Pyrazinamide was identified as the culprit during desensitization. Despite one month of treatment, she continued to develop fever and was diagnosed with a right-sided psoas abscess, requiring ultrasound-guided drainage. GeneXpert® studies of drained pus were positive for *M. tuberculosis* with rifampicin sensitivity. Repeat CECT showed no evidence of spinal or other LN region involvement. Negative sputum GeneXpert® studies excluded concomitant pulmonary TB. An alternative regime that included rifampicin, isoniazid, ethambutol, and ofloxacin was used in management. After being afebrile for two weeks, she was referred to the relevant district chest clinic after four months of hospital stay.

### Discussion

This case report is based on a rare presentation of isolated involvement of iliac LN in TBL complicated with psoas abscess without TB spondylitis, diagnosed in a patient presented with PUO. Extrapulmonary TB (EPTB) accounts for 10-20% of cases of TB in immunocompetent patients, and the most frequent localization is to the LN. It occurs as a result of progressive primary infection or by reactivation of a latent focus acquired during primary infection via lympho-haematogenous spread [1]. However, our patient had no evidence of previous infection or contact history of TB. The absence of significant evidence in history, examination, and investigations limit the diagnosis to medical practitioners who have a high clinical suspicion of EPTB as a possible cause for PUO [2]. Even with uncertain manifestations, we continued to observe our patient closely with daily examination and rational repetition of investigations. As a result, isolated iliac lymphadenopathy was found in an ultrasound scan performed for a simple complaint of new-onset right-

sided inguinal pain. A retrospective study done in Central Sri Lanka reported cervical LN as the commonest localization of TBL followed by axillary, submandibular, supraclavicular, and inguinal LN. Further, isolated iliac LN involvement is not reported [3]. Standing out from usual presentations, we report a case of isolated involvement of iliac LN in TBL. Psoas abscess without associated TB spondylitis is also a rare presentation. Hence, the diagnosis is delayed leading to high morbidity [1]. However, with close monitoring, we were able to detect this complication early in our patient. Diagnosis of TBL can be confirmed by demonstrating *M. tuberculosis* in a biopsy sample obtained from the affected site, by culture, GeneXpert®, and/or a positive AFB result, which has the highest specificity for *M. tuberculosis*. Histological demonstration of granulomatous inflammation with caseation of LN supports the diagnosis [4]. We had histological, GeneXpert® and AFB stain evidence to confirm the diagnosis. The current recommended treatment for TBL is standard quadruple therapy for two months, followed by isoniazid and rifampicin for another four months [4]. However, drug-induced adverse events have an impact on the continuation of this regime, where female sex, older age, and white ethnicity are important risk factors. Hepatotoxicity is the most predominant adverse event, mainly caused by pyrazinamide followed by rifampicin and isoniazid, hence, warranted an alternative regime as in this patient [5].

### Conclusion

EPTB is considered a common cause for PUO but often missed due to its atypical manifestations, as in our patient. Therefore, awareness of such uncommon presentations enables an early diagnosis and treatment of EPTB, benefiting not only the index patient but also the prevention of community spread of this global health burden.

### Conflicts of interest

There are no conflicts of interest.

### References

1. Lombardi R, Pelusi S, Airaghi L, Fargion S. Extrapulmonary tuberculosis: An unusual presentation in an immunocompetent patient. *BMJ Case Rep.* 2015;bcr2014207146. doi.org/10.1136/bcr-2014-207146
2. Kim JH, Kim ES, Jun K Il, Jung HJ, Bang JH, Choe PG, et al. Delayed diagnosis of extrapulmonary

- tuberculosis presenting as fever of unknown origin in an intermediate-burden country. *BMC Infect Dis.* 2018;18(1):426. doi: 10.1186/s12879-018-3349-5.
3. Madegedara D, Nandadeva D, Yasaratne BMGD. Demography and short term outcome of tuberculous lymphadenitis; A case series from central Sri Lanka. *J Tuberc Ther.* 2016; 1(1):1-7.
  4. Fontanilla JM, Barnes A, Von Reyn CF. Current diagnosis and management of peripheral tuberculous lymphadenitis. *Clin Infect Dis.* 2011;53(6): 555–62.doi.org/10.1093/cid/cir454
  5. Smith C, Abubakar I, Thomas HL, Anderson L, Lipman M, Reacher M. Incidence and risk factors for drug intolerance and association with incomplete treatment for tuberculosis: Analysis of national case registers for England, Wales and Northern Ireland, 2001-2010. *Thorax.* 2014;69(10):956-8. doi: 10.1136/thoraxjnl-2013-204503



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