



## Case Report

## Isolated humeral tuberculosis lymphadenitis in healthy woman: Case report



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## ABSTRACT

**Introduction:** Pulmonary tuberculosis is a disease that may effect on many organs such as the lung, peritoneum and spread to adjacent lymph nodes in advanced stages, but it is rarely to be as an isolated lymph node without accompanying pulmonary or extra pulmonary tuberculosis in healthy persons.

**Case presentation:** A 40 -Years-female presented with a chief complaint of Pain in the lateral side of the Right humerus above the elbow, with no medical history, on clinical examination there was a painful palpable mass in mentioned place. The mass was removed surgically under local anesthesia and sent for pathological autopsy. The result of the pathological autopsy was tuberculosis lymphadenitis. After that, the patient has been sent to a specialized center for tuberculosis to receive the suitable treatment.

**Discussion:** More studies should be done to investigate the potential causes of these unusual cases and finding the accurate physiological mechanisms that inhibit the usual manifestations of tuberculosis in these patients to avoid advanced complications.

**Conclusion:** Isolated tuberculosis lymphadenitis in healthy persons is unusual case in the literature, which the clinical doctors should be careful in examination the patients who admitting with abnormal lymph nodes and unknown history exposure to tuberculosis. .

## 1. Introduction

According to estimates by the World Health Organization, about a quarter of The world's population has latent tuberculosis [1]. Tuberculous Lymphadenitis is one of the most common accompaniments of pulmonary Tuberculosis, and in recent years it has been achieving an increasing rate in Incidence despite the low incidence of pulmonary tuberculosis [2].

One of its epidemiological features is that the ratio of infection of females to Males is 1.4:1, with a peak incidence between the third and fourth decades and the patient often comes with a history of cervical lymphadenopathy Without pain [3]. The most location place for the disease to occur is in the Cervical nodes, but its diagnosis may be difficult because it is similar to Many other benign and malignant diseases (sarcoid, unspecified Hyperplasia, malignant lymphoma, etc ...) [4]. It is associated with other systemic symptoms such as fever, fatigue or weight loss and night Sweats, which are not specific as they can occur

with other diseases [5]. The Approved and most efficient diagnostic tools are: Polymerase chain reaction (PCR), excisional biopsy, fine needle aspiration (FNA) with histological Examinations, co-culture with radiographs and tuberculin test. As for the Treatment, it is pharmacological, according to the American Infectious Diseases Association (IDSA), isoniazid, rifampin, pyrazinamide, and Ethambutol for two months, followed by isoniazid and rifampin for another 4 Months, so the total is 1 months of drug therapy [3]. We aim to present a rare case in the literature that confirm coexistence the isolated humeral tuberculosis lymphadenitis in a healthy woman with no pulmonary or extra pulmonary tuberculosis.

This case was written by following the checklist criteria for writing case reports (SCARE guidelines 2020).

## 2. Case presentation

A 40-year-old patient presented to the Aleppo University Hospital

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with a chief complaint of a painful sense in the lateral side of the right humerus above the elbow. She did not mention the presence of past allergies history or medication history in addition there were no previous respiratory abnormalities. There were no clinical manifestations such as fever, fatigue, weight loss or sweating, also the examination of the respiratory system was within normal. On clinical examination and through Palpation, it was found that there was a palpable mass without any redness or swelling on the skin. The laboratory analyzes were completely normal except slight increasing in the ESR ratio. Then we performed a chest x-rays, which it was normal [Fig. 1]. We decided to Excision the lump under local anesthesia with four surgical sutures [Fig. 2] and we sent it to histopathological laboratory, which the removed mass was a lymph node. The microscopic appearance revealed two lymph nodes in oval shape with a diameter of 1.7 \* 3 \* 3.5 cm. also the microscopic picture showed skeletal structure within normal limits including lymphoid follicles, germinal centers, hyperplastic pulp, tuberculous granulomas and paratuberculous granulomas. The first line included centers of cheesy necrosis with no malignancy. The patient was sent to a specialized medical center for tuberculosis treatment and she received quadruple therapy for 4 months: Oral Rifampin (RIF)(10 mg), oral Isoniazid (INH)(10 mg), Pyrazinamide (PZA)(15 mg) and Ethambutol (EMB)(20 mg).

There were no abnormalities during following up the situation of the patient within 3 months by visiting the pulmonary clinic every one week to investigate any abnormal respiratory changes and the clinical response to anti-tuberculosis drugs, which we noted an acceptable improvement.

### 3. Discussion

In our case, the patient presented with a complaint of pain in the lateral side of the right humerus above the elbow without any other accompanying Symptoms. On histological examination, it was found that tuberculous Lymphadenitis was present without it being accompanied by chest Symptoms or other systemic symptoms the confirm the existence of pulmonary or extra pulmonary tuberculosis, and this rarely happens.

Comparing with similar cases in the literature, Mikala Pacifique et al., [6]. had reported a 41-years-old man presented with a 1-day history of dyspnea with enlarged neck mass in the past 3 months and Cough with blood-tinged sputum, fever, night sweats, and wight loss. He Was diagnosed by chest X-ray that showed bilateral diminutive nodules



Fig. 1. Chest x-rays that confirm there are no abnormalities or tuberculosis.



Fig. 2. The picture that shows the location of removed lesion in the lateral side of the humerus.

Concerning for miliary tuberculosis computed tomography scan confirmed a Cystic/necrotic nodal mass Needle aspiration of the neck mass revealed Fluid containing 3+ acid-fast bacilli, and a sputum culture was later positive For *Mycobacterium tuberculosis* complex, and started a treatment of Isoniazid, rifabutin, pyrazinamide, ethambutol, and pyridoxine. Trimethoprim-sulfamethoxazole was also added for *Pneumocystis carinii* Prophylaxis.

According to Isabel Ramírez et al., [7]. a 17 years old heterosexual man Presented with a 3 month history of a painless, enlarging inguinal lymph Node and multiple discharging sinuses There was no history of recent Tuberculosis (TB) exposure and no systemic illnesses such fever, weight Loss, cough, sore throat, urethral discharge, genital ulcer, or trauma to the Lower extremities On physical examination, they noted an enlarged, 4 × 3-Cm inguinal lymph node The chest X-ray showed no abnormalities, and the Histologic examination after excisional biopsy showed granulomas with Multinucleated giant cells and acid-fast bacilli and culture grew *Mycobacterium tuberculosis*. Standard antituberculous treatment for 6 Months was initiated. Clinical response was observed after 2 months of Treatment.

According to Chong Karleen et al., [6]. a healthy 26-year-old man presented With 1-month history of right-sided neck swelling and was increased in size Over 1 week and became red and painful without dysphagia or odynophagia With no history of fever or upper respiratory infection, Neck examination Revealed right supraclavicular swelling measuring 5 × 6cm, fluctuant with no Visible punctum, tender and erythematous looking and Complete baseline Blood investigations were unremarkable, erythrocyte sedimentation rate (ESR) was raised; 53mm/hour and Fine-needle aspiration showed presence Of AFB the patient was referred to the respiratory department for a full Tuberculosis (TB) workup and anti-TB was commenced.

Xuli Ren et al., [8]. a 33-year-old man presented with a history of progressive fatigue and worsening upper spinal pain and chest Radiography showed enlargement of the right hilar lymph nodes, without Parenchymal lesions in either lung and computed tomography (CT) Revealed clear enlargement of the right hilar lymph nodes in the Paratracheal and prevascular regions and unchanged symptoms and Imaging results for more than 3 years On the latest visit, after that the Patient reported worsening of his pain, with a choking sensation in his Chest, fatigue and night sweats. Physical examination showed a body Temperature of 37.2°C, The patient had no other systematic symptoms, CT revealed clear changes in the pulmonary interstitial tissue along with Consolidation in the right upper pulmonary lobe parenchymal thickening and Bronchial erosion and compression near the enlarged lymph nodes and The Tuberculin skin test result was strongly positive, Laboratory examinations Revealed a high erythrocyte sedimentation rate (ESR) of 35 mL/hour and an Elevation of mononuclear leucocytes. A subsequent sputum test was Positive for Tuberculosis bacilli, which were sensitive to anti-tuberculous Drugs (rifampin, isoniazid, ethambutol, pyrazinamide and levofloxacin) Treatment with daily adjusted doses (weight: 70 kg) of rifampin (0.6 g), Isoniazid (0.4 g), ethambutol (1 g) and pyrazinamide (1.5 g), were initiated, Despite treatment, his back pain worsened and was accompanied by painful Dysphagia from the first month of the anti-tuberculous treatment. Thoracic CT revealed newly increased inflammation owing to MTL, The continuation Phase of his anti-tubercular treatment was maintained, and he was Followed-up closely. Three months later, he visited the hospital and Reported symptom improvement.

We conclude from the above that a isolated tuberculous lymph node infection can occur without the presence of systemic or respiratory Symptoms within pulmonary or extra pulmonary tuberculosis, and the doctors in the clinic, when they suspect the presence of any mass in an uncommon place, must do a histological analysis and Confirm the diagnosis as soon as possible to avoid serious complications With the patient [7] and they mustn't rule out isolated tuberculous lymph if the history of patient is exactly clear and there is no signals indicate the tuberculosis in lungs or in other locations.

#### 4. Conclusion

In our case, we present that isolated tuberculous lymphadenitis without Symptoms of pulmonary tuberculosis or other systemic symptoms is a Reality in the medical literature, sophysicians should take this issue into Consideration when facing any mass and establish an accurate diagnosis For it in order to avoid serious complications for the patient's life.

#### Ethical approval

This case report didn't require review by Ethics committee, Aleppo university hospital, Aleppo university, Aleppo-Syria.

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#### Author contribution

All authors have participated in writing and reviewing the manuscript.

#### Registration of research studies

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#### Guarantor

Hidar Alibrahim.

#### Consent for publication

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

#### Declaration of competing interest

All authors declared no conflict of interest.

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