ABSTRACT

Introduction: Tuberculosis lymphadenitis (or tuberculous adenitis) is the most common type of infection with tuberculosis that occurs outside of the respiratory system. Tuberculosis lymphadenitis is a chronic condition caused by Mycobacterium tuberculosis in the granulomatous inflammation of the lymph node caused by caseated necrosis. The number of people who contact tuberculosis is estimated at 8 million per year, and about 3 million people die from tuberculosis in the world.

Presentation of Case: In this case report we delineate the case of a female patient, 26-year-old, she had some pain and lymph node swelling in her right submandibular region since from 4 months and was diagnosed as right Caseating Tuberculous Lymphadenitis, associated with the cervical (neck) region, who was immunocompetent and HIV test negative, with a history of recurring fever, weight loss, loss of appetite for the last 4 months. On physical examination, she had swelling approximately 3×3 cm in the right submandibular region and a hard mass and painful sensation were noticed in her right submandibular region. On Fine needle aspiration cytology of submandibular lymph node reveals Caseating Tuberculous Lymphadenitis. this is extremely rare in immunocompetent individuals.
Keywords: Tuberculosis lymphadenitis; tuberculous adenitis; Mycobacterium tuberculosis; submandibular.

1. INTRODUCTION

Tuberculosis is typically caused by Mycobacterium tuberculosis, which is a systematic disease. Though there has been a rise in extrapulmonary tuberculosis in recent years, the initial lesions are usually pulmonary. This also affects the head and neck region, with the most common cause being a mass in the cervical area. The tuberculosis of orofacial is most commonly found in Childers as compare to adults [1,2,3].

Tuberculosis outside to respiratory system is rare, approximately 10-15 % of all TB cases [4]. For the most part, extrapulmonary tuberculosis may occur in the lungs or may occur primarily without respiratory symptoms. As there is a lack of systematic signs and symptoms, the prepathogenesis phase of the disease may cause difficulty in diagnosis [5].

In rural India, among children up to 14 years of age, the prevalence of tuberculous lymphadenitis is approximately 4.4 cases per 1000 cases of tuberculosis [6].

2. PRESENTATION OF CASE

A female (26-year-old) patient was referred to the medicine outpatient department at Acharya Vinoba Bhave Rural Hospital Wardha. Complaining of painful swelling in the right submandibular region since from 4 months and was noticed on 14th of September 2020. The initial swelling is not noticed but eventually reached to current size after few days.

On general examination, the patient has been losing weight approximately 10 kg and looks thin body build. She has had symptoms of recurring fever, weight loss, loss of appetite from 4 months and there is no history of cough. Past medical history is not significant, but She had a family history of the disease. Her grandmother got this at the age of 40 years and underwent Directly Observed Therapy (DOT) treatment for 6 months.

On oral inspection, in the right submandibular region, single diffuse swelling was observed with ill-defined borders of approximately 3×3. On palpitation, a hard mass and painful sensation were noticed in her right submandibular region.

On clinical diagnosis, based on fine-needle aspiration biopsy (FNAB) reveals Caseating Tuberculous Lymphadenitis was considered. The Mantoux test was positive. No anomaly in radiological results. Chest X-ray did not show any infiltrative lesions or hilar prominences.

She was febrile with an axillary temperature of 38°C. She was hemodynamically stable with a blood pressure of 100/70 mmHg, respiratory rate of 20 breaths/min, and heart rate of 100 beats/min.

The clinical concern of this case and the investigations reveals a final diagnosis of Caseating Tuberculous Lymphadenitis. The patient was referred then to the district government hospital for DOT treatment and further treatment modalities. Anti-Tuberculosis drugs regimens were initiated for 6 months. Standard four-drug regimen, antituberculosis treatment, consists of rifampicin, pyrazinamide, ethambutol, and isoniazid (INH) according to her weight 4 tablets daily was started. No more complications present at the patient and as a doctor’s treatment no surgery is required for this condition.

The patient underwent DOT therapy and the patient taking the medication regularly. The relatives were informed about the prognosis of the disease, DOT therapy patients taking regularly on time. Now she gaining weight in one month of DOTS treatment she gains 4 Kg and swelling also reduce as compare to before DOTS treatments.

3. DISCUSSION

History of direct contact with tuberculosis is seen in 21.8 % of tubercular lymphadenopathy. In our case, the patient had swelling and weight loss from 4 months but was originally noticed on September 14th, 2020. Swelling in the right submandibular region of approximately 3×3 cm.

The MTB target bronchopulmonary organs, head and neck areas secondary [7,8]. The patient underwent the Mantoux test and the hemoglobin was completed. The Mantoux test was found positive and the hemoglobin level was 13.1 gm %. The red blood cell count was 4.33 million/cu mm, the total white blood cell count was 9000 cells/cu mm, and the platelet count was 200,000
per microliter (mcL). Though there are many more diagnostic tests to detect tuberculosis, 84% of cases are diagnosed with tuberculin skin tests [9,10].

She does not have radiograph abnormality on the chest x-ray. To assess the swelling further of the patient, a fine-needle aspiration biopsy (FNAB) result considered Caseating Tuberculous Lymphadenitis.

Material collected from the swelling site using fine-needle aspiration biopsy (FNAB) of the right submandibular region was a cardinal point of view to diagnose a patient disease since the discovery of the granulomatous lesion.

In 50% of culture and microbiology smears performed in the tuberculosis disease condition, the Microbiological findings of mycobacteria were negative [9]. The popularly tuberculous lymphadenitis is known as collar stud abscess, as there is proximity to the collar bones [11].

4. CONCLUSION
Tuberculosis mostly has an unusual influence on lymph nodes. It can be difficult to detect tuberculosis in the absence of any signs in patients, as in our case. Responsiveness of patient and clinician would make it easier to diagnosis Caseating Tuberculous Lymphadenitis. Early diagnosis and treatment get to the patient is a beneficiary for the patient to treat in an early stage it also prevents the spread of disease. Standard four-drug regimen, antituberculosis treatment, consisting of rifampin, pyrazinamide, ethambutol, and isoniazid (INH) was started.

5. FINAL DIAGNOSIS
After undergone all investigation and examination patient diagnoses as Caseating Tuberculous Lymphadenitis.

CONSENT
The investigators state that all applicable patient consent documents have been received. The patient(s) consented to record his / her photos and other clinical material in the article in this manner. The patients recognize that they would not publish their names or identities and make fair attempts to hide their identity, but no anonymity can be assured.

ETHICAL APPROVAL
As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS
Authors have declared that no competing interests exist.

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