

# Tuberculous Cervical Lymphadenitis-The Commonest Cause of Extrapulmonary Tuberculosis

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This study was carried out to analyze 30 patients with tuberculous cervical lymphadenopathy over a period of one year. Eleven (37%) patients were males and nineteen (63%) were females. Mean age was 30.06 years. Twenty-two (73%) patients presented with classical symptoms of tuberculosis (fever with evening rise, night sweats, anorexia and weight loss). Six patients had cold abscess. Five patients were montoux negative and six presented with normal ESR. In 24 patients FNAC was performed. The sensitivity rate was 64% (15/24) and specificity 100%. Lymph node excision biopsy was done in 18 cases with sensitivity of 90% and specificity of 100%. Ten-percent patients had adverse reactions with anti tuberculous therapy. Two patients presented with relapse and were put on drugs used for multi-drug resistant tuberculosis.

**Key words:** Cervical tuberculous lymphadenitis, fine needle aspiration cytology, Anti tuberculous therapy (ATT).

Tuberculosis is the most prevalent disease in our society. The incidence of tuberculosis is on a rise throughout the world mostly due to emergence of drug resistant strains and HIV<sup>1</sup>. It presents in many different forms. The most common is pulmonary tuberculosis but lesions at extra pulmonary sites are also at a rise. The most common presentation on the surgical floor is with cervical lymphadenopathy. There are different modes of presentation of cervical lymphadenopathy like unilateral lymph node chain enlargement, bilateral lymph nodes involvement and cold abscess.

## Material and Methods

This study is carried out on 30 patients during one year time period on an out door basis. All the patients had cervical lymphadenopathy either as a primary lesion or secondary to lesion elsewhere. They were all evaluated thoroughly regarding their presentation (typical or atypical symptoms) and investigations (diagnostic FNAC or investigations). After confirmation of diagnosis all the patients were put on ATT and their response to treatment was observed. Complications and relapses were also managed accordingly.

All the patients were scrutinized according to their symptoms, signs regarding cervical swelling, condition of chest and cold abscess, as shown in Table No 1.

Table No. 1

	n=	Mean Age
Male	11	35.2
Female	19	27.1

All the patients were investigated with a standard protocol. Routine investigations included Hb, TLC, DLC, ESR, CXR and Montoux. Cervical swelling in each case was managed diagnostically. Cold abscesses were aspirated. In the rest of the cases FNAC of cervical lymph node was done first. Excision biopsy was done in case of failure of FNAC and to reconfirm findings of FNAC.

After investigations all the patients were put on ATT and their initial response to treatment was noted regarding immediate relief of symptoms, early complications and relapse.

## Results

Study included a total of 30 patients including 11 males and 19 females. Age range was between 14 and 79 years with a mean age of 30.06 years. Of the 30 patients 22 presented with fever with 19 having typical evening rise of temperature and 3 having atypical pattern. The other classical features of tuberculosis (night sweats, anorexia and weakness) were also seen in approximately 50% of the cases, 19(63.3%) had pulmonary and others had extrapulmonary disease, as shown in Table No 2.

Table No. 2

Symptoms	n=	% age	Male	% age	Female	% age
Fever	22	73.33	08	26.66	14	46.66
With evening rise			07		12	
Atypical			01		02	
No Fever			03		05	
Night Sweats	15	50	07	23.33	08	26.66
Wt Loss	17	56.66	07	23.33	10	33.33
Anorexia	15	50	07	23.33	08	26.66
Others (cough, chest inf., cervical swelling)	19	63.33	09	30	10	33.33

All the patients had cervical lymphadenopathy but only 8 of them had some active disease and 6 of them had cold abscess sinus associated with the lymphadenopathy, as shown in Table 3.

Table No. 3

Clinical Features	n=	Male	Female
Cervical L. N.	27	11	16
Findings in Chest	08	04	04
Cold Abscess / Sinus	06	Nil	05 / 01



In investigations 5 patients were Montoux negative and mean ESR was 47.6mm in 1 hour with 6 patients presenting with normal ESR. (Table No. 4).

Table No. 4

Investigations	n=	% age	Male	%age	Female	% age
Hemoglobin	10.7		11.1		10.5	
Lymphocytosis	18	60	6	20	12	40
E.S.R.	47.6		49.3		46.6	
Montoux +ve	25	83.33	10	33.33	15	50

Of the cervical swelling 6 patients who presented with cold abscess had the abscess aspirated and culture and sensitivity was performed and the patients were put on ATT. In 24 patients excluding 6 with cold abscess FNAC was first line of investigation. Of these 24 patients, diagnosis was confirmed in 15 patients and in nine cases the results were non-specific inflammatory reaction. Of these 15 patients with positive results on FNAC 6 were started on anti tuberculous therapy who refused lymph node biopsy. Nine patients who consented and the nine patients who were reported to have non-specific inflammation on FNAC underwent excision biopsy of lymph nodes. Sixteen patients were found to have tuberculosis and were put on anti tuberculous therapy. (Table 5 and 6) Two reported with non-specific inflammation were also put on anti tuberculosis therapy. All responded to ATT.

Table No. 5

Investigations	n=	% age	Male	%age	Female	% age
<i>Cervical Swelling</i>						
Cold Abscess	06	20	Zero		06	20
FNAC +ve	15	50	08	26.66	07	23.33
FNAC non Specific	09	30	03	10	06	20
Excision Biopsy +	18	60	06	20	12	40
Biopsy not done	12	40	05	16.66	07	23.33

Table No. 6

Treatment Given	n=	% age	Male	% age	Female	% age
Pt's. put on Myrin P	27	90	11	36.66	16	53.33
Pt's on split therapy	03		Zero		03	

Table No. 7

Follow up / Complications	n	% age	Male	% age	Female	% age
Drug reaction (LFT's Abnormal)	03	10	01	3.33	02	6.66
Relapse	02	6.66	Zero		02	6.66

Regarding treatment 10% of the patients had adverse reaction with ATT and their therapy was changed and they were put on recent drugs. Two patients presented with relapse and they were put on drugs used for multi-drug resistant tuberculosis. (Table No 7)

## Discussion

Over the last decade mycobacterial infections have been shown to be on the rise in all parts of the world.<sup>1</sup> The diagnosis of mycobacterial cervical lymphadenitis otherwise known as scrofula, should thus be entertained when faced with the hallmark presentation of chronic, non-tender lymphadenopathy.

Hope of drastic reduction in the incidence of tuberculosis with the availability of anti-tuberculous agents has not been realized. In their twenty years study Mahmood and Asghar have shown the number of patients with the condition remained constant in each five-year period from 1971-91<sup>2</sup>.

Recent advances of molecular techniques make diagnosis of pulmonary tuberculosis rapid and easy comparing to conventional technique. However, diagnosis for tuberculosis, especially tuberculous pleuritis, tuberculous lymphadenitis and non-pulmonary tuberculosis is not easy<sup>3</sup>.

The peripheral lymph nodes represent 41%, the most commonly involved extrapulmonary organ system.<sup>4</sup> At present, cervical lymph node TB is of clinical relevance on one hand in patients from endemic areas of TB in the developing countries and on the other hand in immunocompromised patients, particularly in course of HIV infection.

Male to female ratio is variable in different studies<sup>5</sup>. Some document high prevalence in young female while others have noted that disease affects both sexes equally, the present study also shows high prevalence among young female patients.<sup>6</sup>

Painless cervical lymphadenopathy when associated with fever, night sweats, loss of appetite, loss of weight, anemia, and raised ESR is highly suggestive of tuberculous cervical lymphadenopathy.

In our study fever with evening rise was the commonest symptom (63%), followed by weight loss (56.6%), night sweats (50%) and anorexia (50%). This finding is consistent with other studies.<sup>7</sup>

The raised levels of ESR (mm in 1 hour) were a constant finding in our study. This is in accordance with other studies.<sup>8</sup>

The tuberculin reaction following the intradermal injection of PPD appears 48-72 hours after injection. The positivity is shown by >5mm area of induration of the skin. Tuberculin reaction is an invaluable instrument of epidemiological investigation. Clinically the value of tuberculin test, though remarkable, is limited by the fact that its positivity is not necessarily a sign of active tuberculosis. In present study Montoux test was the most constant finding to be positive. This was positive in 83.33% cases.

FNAC is a simple, inexpensive procedure, and when complemented by appropriate immunocytochemical studies is accurate and reliable for routine diagnosis of lymphadenopathy. The FNAC has high rates of sensitivity 83.3% as well as specificity 94.3% for tuberculosis.<sup>9</sup>

In our study we performed FNAC in 24 patients with



a sensitivity rate of 64% and specificity of 100%. The low sensitivity rate in our study is probably due to lack of expertise available for FNAC.

Lymph node biopsy is a useful method for diagnosis of tuberculous lymphadenopathy.<sup>3, 10, 11</sup> In our study we performed lymph node excision biopsy in 60% cases and curettage for fluctuant cases. Excision biopsy has a sensitivity rate of 90% and specificity of 100%. Hence Lymph node biopsy is an effective and practical aid in diagnosing tuberculous cervical lymphadenopathy.

Cervical lymph node tuberculosis responds well to Anti tuberculous chemotherapy. The global rate of resistance is 10.8% and that of Multi drug resistant tuberculosis is 3.1%.<sup>12</sup> In our study 90% of patients were put on combination chemotherapy (Myrin P) and 10% on split drug therapy. We observed relapse in 6.66% of cases. They were treated by excision of lymph node along with combination of sensitive anti-tuberculous drugs added with PZA, new quinolone agents and clarithromycin.

Adverse reactions to anti-tuberculous drugs are hepatotoxicity, peripheral neuritis, allergic reactions and ocular toxicity. Risk factors include old age, malnutrition and high alcohol consumption. We observed altered LFT's in three cases.

#### Conclusion:

The incidence of tuberculosis is high in urban areas of walled city of Lahore. It mainly effects young males and females of unfavoured socioeconomic classes. The high number of active cases evidences the shortcomings of our sanitary system. These facts together with the high rate of non-compliance, of treatment may explain the seriousness of the current situation in our country.

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