

Prevalence Of Tuberculous Lymphadenitis In Accordance With Regions Involved At Tertiary Care Hospital.

Mashooq Ali Khowaja¹, Gulshan Ali Memon², Inayat Ali Zardari³, Sadia Ayoob Chandio⁴, Naeem Karim Bhatti⁵, Altaf Hussain Ghumro⁶.

1.Dr. Mashooq Ali Khowaja
MBBS, FCPS

Associate Professor, Surgical Unit 2
PUMHSW Nawabshah.
Nawabshah.

Email: altafkhadim@yahoo.com

Cell no. 03002446047.

2.Dr Gulshan Ali Memon

Professor, surgery
PUMHSW Nawabshah.
Nawabshah.

3.Dr Inayat Ali Zardari

MBBS, M.S General Surgery
Assistant Professor, Surgical Unit-II
PUMHSW Nawabshah.

inayat_zardari@yahoo.com

03363808532

4.Dr Sadia Ayoob Chandio

Senior Registrar Surgery
PUMHSW Nawabshah.

5.Naeem Karim Bhatti

Assistant Professor, Surgical Unit-II
PUMHSW Nawabshah.

6.Dr Altaf Hussain Ghumro.

MBBS, M.S General Surgery
Senior Registrar, Surgical Unit-II
PUMHSW Nawabshah.

.03337560170

altafkhadim@yahoo.com

CORRESPONDING AUTHOR

Dr Altaf Hussain Ghumro.
MBBS, M.S General Surgery
Senior Registrar, Surgical Unit-II
PUMHSW Nawabshah.

.03337560170

altafkhadim@yahoo.com

Abstract

Introduction:- Tuberculous lymphadenitis is the most common type of extra pulmonary tuberculosis throughout the world. The common organism involved is Mycobacterium tuberculosis. Swelling on affected area is the common symptom along with low grade fever and history of weight loss. Excision biopsy is done to confirm its diagnosis after FNAC done for cytology. Anti Tuberculous therapy is given for appropriate time with sufficient dose.

Type of study:- Cross sectional

Duration of study: One year Mar 2019 to Feb 2020

Place of study:- Surgical Unit 2 PMCH Nawabshah.

Results:- Total 150 patients were taken for the study. 56 diagnosed with cytology were included in the study. 30 (53.57%) were female and 26 (46.42%) were male. Age ranged from 14 -70 years . The regions involved were also different. Of all, 15 (26.78%) patients presented with inguinal lymphadenopathy. 28 (50%) cases were of cervical area. 10 (17.85%) cases had axillary lymphadenopathy. Only 2 (3.57%) patients were of submandibular area and 1(1.78%) patient was of submental.

Conclusion:- it is summed up that prevalence in our study like other studies of the world is higher. The most common region involved is cervical followed by inguinal, axillary, submandibular and submental.

Key words:- Extra pulmonary, Mycobacterium Tuberculosis, Excision biopsy, ATT, FNAC.

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INTRODUCTION

Currently, the infection caused by Mycobacterium Tuberculosis complex organisms is counted among top ten causes of global mortality. Year by year, new patients are added in this increasing score of patients and death also. According to one survey, 10 million people developed Tuberculosis worldwide. In medical practice, two terminologies are used to describe this disease.¹ One is pulmonary tuberculosis and second is extra pulmonary tuberculosis (EPTB). The Latter can affect many organs like bones, nervous system, cervical, inguinal regions, joints, genitourinary tract, gastro intestinal system and others. This infection can present independently or sometimes associated with

pulmonary tuberculosis. A study in Spain has shown increase of 8% incidence of EPTB over ten years. In Korea, the ratio is 20% of cases. The world is moving to alarming situation in this connection.² The most common type of EPTB is Tuberculous Lymphadenitis. It is also popularly known as collar stud abscess. It is the chronic granulomatous inflammation of lymph nodes with caseation necrosis caused by infection with Mycobacterium Tuberculosis. In cervical region, it is called as scrofula. Unfortunately, the disease is diagnosed in many countries because it requires a high index of suspicion.³

The prevalence of this disease in India is common in Children upto 14 years with ratio of 4.4 cases per 1000. In Unites states,

the ratio is 30-40%. In Danish, it was reported to have among 13.5% cases in 2016.⁴ Pathogenesis entails that isolated peripheral tuberculosis lymphadenopathy is usually due to reactivation of disease at a site seeded hematogenously during primary TB. Morphologically, the characteristic is the tuberculosis granuloma consisting of giant multi nucleated cells and langhans cells which are surrounded by epithelioid cells, T-cell lymphocytes and fibroblasts. Eventually, the development of caseous necrosis occurs while replacing the lymphoid tissue.^{5,6} The most common organism involved is Mycobacterium Tuberculosis. Others rarely involved organisms are Mycobacterium Bovis, Mycobacterium Kansasil, Mycobacterium Fortuitum, Mycobacterium Marinum, and Mycobacterium Ulcerans.⁷

This disease passes through multiple stages. The stages sequentially are lymphadenitis, periadenitis, cold abscess, collar stud abscess and sinus. The clinical features presented by patients are swollen lymph nodes, mild fevers, indigestion and weight loss etc.^{8,9}

The diagnosis of the disease essentially requires excision biopsy. Other investigation to be done for diagnosis are positive tuberculin test, X Ray Chest, CT Scan,

FNAC, AFB staining and Mycobacterial culture. Treatment is most likely Anti-tubercular medications.¹⁰

The rationale of our study is to find out the prevalence, the regions involved and the management of tuberculous lymphadenitis so that patients may be saved from its occurrence and manage the disease properly.

MATERIAL AND METHODS:-

This study was done on 150 patients at surgical unit 2 PMCH Nawabshah. The duration of study was one year from March 2019 to February 2020. Patients were admitted from Surgical OPD and emergency department of PMCH Nawabshah. Referred cases from Medical ward for Excision biopsy were also included in this study. After taking clinical history and doing general physical examination, local examination of regional lymph nodes like cervical, inguinal, sub mandibular and sub mental was done thoroughly. Vitals and sub vitals of all patients were recorded. All patients were undergone FNAC to know the cytology. After cytology, only patients with clue of tuberculosis were included in the study. All other cases were excluded from the criteria. Excision biopsy of the tuberculosis cases were done in main OT under Local Anesthesia and General Anesthesia.

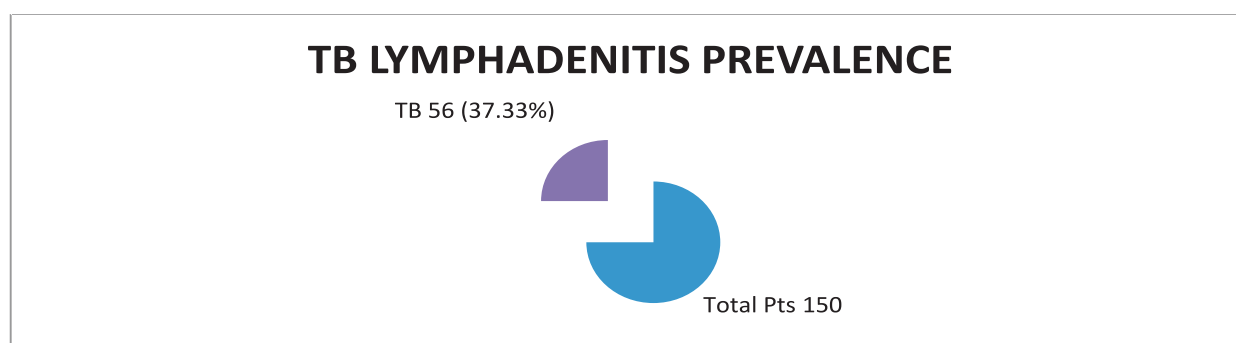
RESULTS

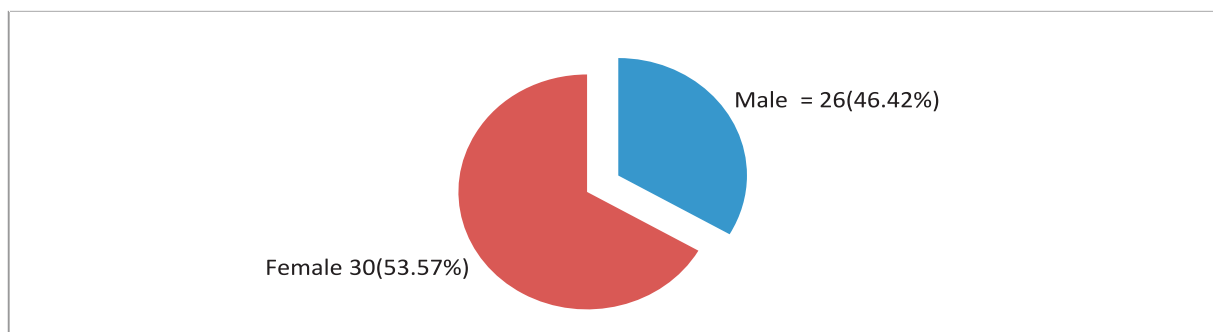
Total 150 patients were included in this study. Out of them, 56 (37.33%) Age difference was also noted among patients. Of 56 patients, 30 (53.57%) were female and 26 (46.42%) were male.

30 (53.57%) patients aged from 14 years to 27 years. 15 (26.78%) patients age was between 28 to 38 years. Only 6 (10.71%) patients age ranged from 39 to 55 years and only 5 (8.92%) were of age 56 to 70 years as is shown in table 1

Multiple regions lymph nodes were involved in these cases. 15 (26.78%) patients

presented with inguinal lymphadenopathy. 28 (50%) cases were of cervical area. 10 (17.85%) cases had axillary lymphadenopathy. Only 2 (3.57%) patients were of submandibular area and 1(1.78%) patient was of submental as is shown in table 2 Excision biopsies of all patients were taken to confirm the diagnosis. When diagnosis arrived, all the patients were treated by Anti Tuberculous medications. Nine months treatment of Rifampicin and isoniazid supported by ethambutol for 2 months were given to these patients.



**TABLE 1 = AGE DIFFERENCE .**

S.NO:	AGE IN YEARS	NO OF PATIENTS	PERCENTAGE
1	14-27	30	53.57%
2	28-38	15	26.78%
3	39-55	06	10.71%
4	56-70	5	8.92%
Total	n=14-70	56	100%

TABLE 2= AREAS INVOLVED IN TUBERCULOUS LYMPHADENITIS

S.NO:	AREA INVOLVED	NO OF PATIENTS	PERCENTAGE
1	Cervical	28	50%
2	Inguinal	15	26.78%
3	Axillary	10	17.85%
4	Submandibular	2	3.57%%
5	Submental	1	1.78%
Total		56	100%

DISCUSSION:-

Tuberculous lymphadenitis has been recognized for last hundreds of years and is one of the most common forms of extra pulmonary tuberculosis. Cervical lymph node involvement is the most common area followed by axillary and inguinal. It is more common in immune compromised patients like HIV infection. There is occurrence of disease due to secondary to reactivation of latent tuberculous infection. The prevalence of HIV infection among patients of Tuberculous lymphadenitis is 15.5%.¹¹

The prevalence of Tuberculous Lymphadenitis has been noted higher in developing countries as compared to developed ones. The example of Ethiopia can be quoted in this regard. In a study, the prevalence of Tuberculous Lymphadenitis (TBLA) was 69.5% which is similar to the study done in Tanzania. In studies done in Israel, Ethiopia and India, the prevalence was 70%, 72.8% and 73.5% respectively.¹² In another Indian study, the prevalence is 83%. The higher incidence in India is only due to poor awareness to people, increased sample size and longer duration of study. Ontrary to these studies, the prevalence of Tuberculous lymphadenitis in a study in Nigeria was 24.45%. In a study done in Pakistan, it was

44%. In another study in India, it was 62% only. In our study, the prevalence is 37.33% only.¹³

Keeping in view the age profile of patients suffering from Tuberculous Lymph node disease (TBLN) , the involvement of younger patients aged between 15 to 24 years were seen in ratio of 28.5%. The prevalence in patients aged from 25-34 years was 27.6%. other studies also showed that the patients aged below 30 years were the common group involved in this disease.¹⁴ In Nigeria, patients aged 10-19 years had prevalence of 28.15 and 20-29 years had ratio of 21.8%. in our study, the age group from 14-27 years had 53.57% and aged from 28-38 years had 26.78% ratio. In our study like other studies, younger age groups have higher ratio of involvement.¹⁵

The gender involvement in other studies showed females more affected as compared to males. In our study, similar results were recorded. Females' ratio was 53.57% and male ratio affected by this disease was 46.42%.¹⁶

The region involved in tuberculous lymphadenitis also showed different results in different studies. In a study, cervical lymph nodes were found to be most commonly involved area which was 47.5%.

Our study also showed nearly same results. Our cervical area affected was 50% of the cases.¹⁷ In a study done in Ethiopia, regional involvement was cervical, axillary and inguinal with ratio of 74.2%, 20.3% and 4.3% respectively. Similar results were seen in studies done in India and Nigeria. In our study, the regions involved were cervical, axillary, inguinal, sub mandibular and sub mental with ratio of 50%, 26.78%, 17.85%, 3.57% and 1.78% respectively.¹⁸

CONCLUSION:-

It is concluded that prevalence of tuberculous lymphadenitis is higher particularly in immunocompromised patients. The common region involved was cervical then inguinal and axillary areas sequentially.

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