MEDICAL CHANNEL

Original Article

CLINICAL MANIFESTATION OF EXTRA PULMONARY TUBERCULOSIS

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ABSTRACT:

Background: Tuberculosis is a worldwide disease and one of the major problems in Pakistan.Extrapulmonary Tuberculosis is increasing all over the world. The main objective of this study to see the clinical manifestation, presence of constitutional symptoms and diagnostic value of laboratory investigations i-e Erythrocyte Sedimentation rate (ESR) and Mantoux Test.

Material and methods: This a year study was carried out at the Department of Surgery Lyari General Hospital Karachi Pakistan

Results: There were43 (53.76)%female patients and 37(46.2). male ,most of the patient belong to Of age group.the most common clinical presentation was lymphadenopathy in 29(36.2%) patients,out of which 18 had Cervical,8 had Axillary and 3 had inguinal lymph adenopathy, abdominal Tuberculosis in 28(35%) patients, Tuberculous abscesses in 9(11.2%), Tuberculosis of breast in 5(6.2%) patients, TB spine in 2 (2.5%), Musculoskeletal Tuberculosis in 3(3.7%) patients,perianal ulcer and Genital % Tuberculosis in 2(2.5%) patients.most of the patients were not vaccinated (68.5%), Mantoux test was Tuberculosis in 2(2.5%) patients. Most of the patients were not vaccinated (68.5%), Mantoux test was positive in 70% while ESR was raised in 61 % patients. Weight loss was seen in 75% of the patients followed by evening pyrexia and night sweats.

Conclusion: This study indicated the diversity of clinical presentation of extra pulmonary tuberculosis. Clinical diagnosis combined with raised ESR, positive Mantoux test with significant weight loss may suggest Tuberculosis .

INTRODUCTION:

The History Of Tuberculosis Stretches back along time and it has been a major killer for many years .During the time of Hippocrates and much later also, it was known as “Phthisis” , a Greek word meaning “wasting away”.

The propagation of Tuberculosis is directly associated with hygienic and socioeconomic condition. Except for the recent increase in the incidence of tuberculosis in the west due to HIV, Tuberculosis is generally a disease of poverty. Tuberculosis is a worldwide disease ,majority of the cases are from Asia 55% and Africa 18% [1-]

By definition, Extra pulmonary Tuberculosis, is the isolated occurrence of Tuberculosis at body sites other than the lung. Extra pulmonary Tuberculosis involvement of Tuberculosis is estimated as 10-34% who are not infected with HIV, where as the frequency is about 50-70% in patients infected with HIV .[2,3]

Tuberculosis is a major health problem in Pakistan.and unfortunately it has been one of the neglected health areas in the past. Pakistan ranks 8th amongst the Countries with highest burden of Tuberculosis in the World. Pakistan contributes about 44% of Tuberculosis

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burden in the Eastern Mediterranean Region [4].

According to the World Health Organization(WHO), the incidence of sputum positive Tuberculosis cases of Pakistan is 80/100,000 per year and for all types it is 177/100,000.Tuberculosis is responsible for 5.1 % of the total national disease burden in Pakistan .[5]

As Extra pulmonary Tuberculosis still constitutes an important clinical problem.we aimed to evaluate the incidence and clinical manifestation or features of Extra pulmonary Tuberculosis. ,presence of constitutional symptoms and diagnostic value of laboratory investigations i-e Erythrocyte Sedimentation rate (ESR) and Mantoux Test.

MATERIAL AND METHODS:

It is prospective, cross- sectional, observational study of a total of 80 patients who attended the out patient Department of surgical unit ii of Lyari General Hospital Karachi and Emergency Department of Ward 26 Jinnah Postgraduate Medical Centre during April 2010 to March 2011 over a period of one year clinically and biopsy proven cases of Extra pulmonary Tuberculosis were included in this study while those with Miliary Tuberculosis and sole pulmonary cases were excluded from the study.

A thorough History & Clinical examination was performed in out patient department. Patients were investigated with routine laboratory investigations like complete blood picture(CBC),erythrocyte sedimentation rate(ESR), chest x-ray,Mantoux test was done by injecting 0.1 ml of PPD containing 5 TU(units). A reading of10 mm or more after 72 hours was taken as positive. Diagnosis was confirmed by histopathology. Those presented in emergency Department first resuscitated and exploratory laparotomy done where needed .All patients were later on kept on antituberculous chemotherapy. follow-up of the patients were done in out patient department for 16 weeks

An informed consent was taken by all patients. Statistical analysis was done by using SPSS version 11.age,sex and clinical Presentations of the patients are represented in Tables

RESULTS:

A total of 80 patients were included in this study . there were 43 (53.7%) Female and 37(46.2%) male .Age ranged between13 to 62 years with a mean age of 27.5 +11.1 the patients were between 12 to 30 yrs age group . Table 1 demonstrate the details of age and gender of the patients.

The clinical presentation as given were lymhadenopathy in 29 (36.2)patients out of which 18 had cervical lymphadenopathy,8 axillary lymphadenopathy while 3 had inguinal lymph adenopathy .it is followed by abdominal Tuberculosis 28(35%),tuberculous abscesses 9 (11.2%)Breast tuberculosis in 5(6.2%) patients,Tb spine in 2 (2.5%) patients,muculokeletal 3(3.7%) ,perianal and genital Tuberculosis in 2 (2.5%) patients each details of which are shown in table 1

Constitutional symptoms like evening pyrexia (55%), night sweats (40%) were found inpatients while weight loss in (75%)details given inTable 2.Out of 80 patients 25 (31.2%) were BCG vaccinated while 55(68.7%) were not vaccinated against Tuberculosis Positive Mantoux test and raised ESR was found in 70% and 61% respectively as shown in Table 2.

Patients represented with lymphadenopathy underwent excisional biopsy while for abscesses incision and drainage were done ,in abdominal tuberculosis right hemicolectomy were done in 2 cases ,resection and anastomosis in 8 cases ,conservative treatment in 5 cases,stricturoplasty in 5cases while ileostomy was made in 8cases.Laminectomy with extradural mass excision done in 1 case while tuberculosis breast were dealt with incision and drainage and daily dressing afterwards

DISCUSSION:

Despite our deep understanding of the pathology, natural course, and treatment of Tuberculosis, the disease remains an important health issue, throughtout the world .In 1993 the WHO declared Tuberculosis an emergent disease, because approximately 8 million people are infected worldwide. Moreover significant challenges like increased drug resistance have been noted. [6,7]

Our study shows higher number of female cases than male ,the similar results seen in the studies carried out by chandir et al [8], shafi et al [9] in Pakistan, the reason why women are more prone to progression of the disease because they are more immune deficient [10]

The other reasons women seek advice due to fear of stigma, women in all locations were afraid of not being marry or of being divorced if they are diagnosed with Tuberculosis . They are more vulnerable to infection as they are only health care providers in the family for the ailing in laws, husband and affected children with Tuberculosis. Some international studies revealed male preponderance [11,12] ,while study conducted by Hussain et al [13] showed that Extra Pulmonary

Tuberculosis is equally common in male and female.

In this study maximum incidence of Extra pulmonary tuberculosis was found in adolescent and young adult age group. During the first five year of life the body resistance is poor against Tuberculosis.From five to fifteen years resistance at its peak,but it breaks down during the early adult period15-30 years.After 30 years resistance is quite high but it breaks down again in old age particularly in men [14] .

Makaju and colleague [15] found Extrapulmonary Tuberculosis common in age group less than 25 years (60%). ,similar results are seen in study conducted in Bangladesh [16]

Regarding BCG vaccination among patients it was found there was significant increase in incidence of the disease among non-vaccinated patients .BCG vaccination had been proved to be reducing incidence of tuberculosis by 80% compared with non-vaccinated in study by Biswas [17]

constitutional symptoms were weight loss in 75 %patients, evening pyrexia 55 % & night sweats in 40 % patients similar results are seen in study conducted by Danish [18] In our study Mantoux test was positive in 70% patients while ESR was found raised in 61 % patients . Despite many limitations and the non-specific nature of these tests, Mantoux Test along with ESR ,are two of the most common investigations used in the work up of the patients with suspect Tuberculosis. Some studies report significantly high MT and ESR values in active cases and suggest high values may be used to initiate antituberculous therapy in the presence of relevant clinical presentation. [19]

Mycobacterium Tuberculosis is presumed to spread in sequence from primary Lung site to various organs of the body, therefore tuberculosis can cause disease in all organs and mimic various diseases.in our study the commonest site are lymph nodes ,among lymph nodes cervical group are more commonly affected followed by axillary and inguinal .our results are in accordance with other studies[11] ,while one study conducted in India [20]found axillary

GRAPH 1:
SHOWING DISTRIBUTION OF AGE AND SEX AMONG THE DIFFERENT VARIETIES OF EXTRA PULMONARY TUBERCULOSIS (n=80)

Types of EPTB	Age groups				Sex		Total	%
	12-20 51-60	21-30	31-40	41-50	M	F		
Lymph node TB	11	10	4	4	10	19	29	36.2
Abdominal TB	8	9	7	3	13	15	28	35
Tuberculous Abscesses	2	6	1		7	2	9	11
Breast TB Right Left	3 1				1	3 2	5	6.2
Musuloskeletal TB	1	1	1		1	2	3	3.7
Spine TB	1		1		2		2	2.5
Peianal abscess,ulcer	1	1			2		2	2.5
Genital (epididymis)			1	1	2		2	2.5
Total			1	1	37	43		
Percentage %	24	31	13	9	46.2%	53.7		
	30.0	38.7	16.25	11.2				
	p-value=0.01							

TABLE 2:
SHOWING PRESENCE OF CONSTITUTIONAL SYMPTOMS AND DIAGNOSTIC TEST VALUE

	POSITIVE	NEGATIVE
MANTOUX TEST (MT)>10mm	56 (70%)	24 (30%) p=0.01
ESR >30MM	49 (61%)	31 (39%) P=0.01
EVENING PYREXIA	44 (55%)	36 (45%) P=0.01
NIGHT SWEATS	32 (40%)	48 (60%) P=0.01
WEIGHT LOSS	60 (75%)	20 (25%) P=0.01

TABLE: 3
SITE OF LYMPHADENOPATHY AND ABDOMINAL TUBERCULOSIS

1.	CERVICAL n=18	LYMPH ADENOPATHY(n=29) JUGULODIGASTRIC 7 POSTERIOR TRIANGLE 3 MID JUGULAR 5 SUPRACLAVICULAR 3
2.	AXILLARY n=8	ANTERIOR GROUP 4 POSTERIOR GROUP 2 CENTRAL GROUP 2 APICAL GROUP
3.	INGUINAL n=3	SUPERFICIAL 2 DEEP 1

ABDOMINAL TUBERCULOSIS (n=28)

1.	PERITONEUM	5
2.	ASCENDING COLON	6
3.	TERMINAL ILEUM	8
4.	SMALL GUT	9

lymph nodes and other study conducted by Ilgazli [21] showed ,71.55% intrathoracic lymph node involvement followed by cervical,axillary lymph nodes.

14 cases (17.4%) presented with abscesses in different parts of the body out of which five had Tuberculosis of breast while Haagensen [22] reported only five cases of breast TB Between 1938 to 1967. An Indian series reported the incidence of breast TB amongst the total number of mammary conditions to vary between 0.64 to3.59 %.[23,]

Genitourinary Tuberculosis was reported as the second most common site of extra pulmonary Tuberculosis by heish et al [24] while in our study we did not find the similar distribution of genitourinary tract Tuberculosis. The most common site of TB bone was vertebral column ,and the involvement is generally monoarticular.Abdomen is also one of the common site of extra pulmonary tuberculosis involvement in our study ,more or less similar results found in study conducted by ozvaran [25]

CONCLUSION:

This study indicated the diversity of clinical presentation of extra pulmonary tuberculosis. Clinical diagnosis combined with raised ESR, positive Mantoux test with significant weight loss may suggest Tuberculosis .Early diagnosis will prevent the mortality and morbidity from this dreadful but curable disease.

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