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Clinicopathological Study of Various Newly Diagnose Extra Pulmonary Tuberculosis at Tertiary Care Centre Bikaner

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Abstract

Background: In India, tuberculosis is still considered as a social disease, reflecting the standards of living in a community. Tuberculosis can quiet rightly be termed India's "National Disease".

Methods: Hospital based cross-sctional study conducted at Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner. Patients presenting with various manifestations and complications of extra pulmonary tuberculosis warranting surgical intervention.

Results: 61.00% patients was cervical lymph node followed by 22.00% patients was ileocaecal region, 7.00% patients was breast and 10.00% patients was anorectal region.

Conclusion: 8.00% patients were manage by resection-anastomosis followed by 6.00% patients manage by stricuroplasty , 3.00% patients were manage by adhenolysis , 3.00% patients were manage by loop ileostomy and 2.00% patients were manage by hemicolectomy.

Keywords: TB, Lymphnode, Abdominal.

Introduction

Tuberculosis is one of the earliest diseases affecting the mankind. Tuberculosis (TB) was a prevalent infection even in Ancient Greek and Egypt. It was known to Hippocrates who gave it the name of phthisis, which means wasting disease. [1] In India, tuberculosis is still considered as a social disease, reflecting the standards of living in a community. Tuberculosis can quiet rightly be termed India's "National Disease".[2]

Cervical tubercular lymphadenopathy is the most common extra pulmonary manifestation tuberculosis and its routs of infection through the lymphatics comes from primary sources eg. Pulmonary tuberculosis. In many diseases ranging from trivial inflammatory conditions to serious malignant conditions affects lymph nodes. Almost all the diseases of lymph nodes results in enlargement of nodes causing lymphadenopathy. Thus, lymph node enlargement is quite a common clinical problem.

Gastrointestinal tuberculosis often involves the ileo-caecal region. The ileal and ileo-caecal regions are the most common sites affected. Associated colonic involvement is frequent and isolated colonic involvement is not uncommon. Abdominal tuberculosis may present clinically as an acute abdomen, either due to bowel obstruction, perforation or mass in right lower abdomen mimicing acute appendicitis or appendicular mass. Most of the GIT tuberculosis is caused by mycobacterium tuberculosis species and Most of the patients present with chronic abdominal pain recurrent sub-acute obstruction and low-grade fever with or without weight loss .[3]

Surgical management of intestinal tuberculosis has changed considerably from bypass operation and hemi colectomy to conservative resections and stricturoplasty. Surgery in case of abdominal tuberculosis is required to overcome the deleterious effects of the disease like tissue disorganization, obstruction and perforation. The study is intended to know the various modes of presentation; different modalities of treatment and prognosis in our hospital.

Material and Methods

Study design: Hospital based cross-sctional study.

Study place: Dept. of Surgery, S.P.Medical College and P.B.M Hospital, Bikaner

Study population: patients presenting with various manifestations and complications of extra pulmonary tuberculosis warranting surgical intervention.

Sample size: 100 patients who fit into the inclusion criteria was included in the study.

Sampling Method: Convenience sampling

Inclusion Criteria: patients presenting with various manifestations and complications of extra pulmonary tuberculosis warranting surgical intervention.

Exclusion Criteria

- Immunocompromised individuals.
- Patients recovering with conservative line of management
- Pateints less than 12 yrs of age.
- Pregnant women
- Skeletal Tuberculosis

Data Collection: A proforma was made and clinical, laboratorial, operative & post operative course of the patients presenting with extra pulmonary tuberculosis was studied.

Data Analysis: To collect required information from eligible patients a pre-structured pre-tested Proforma was used. For data analysis Microsoft excel and statistical software SPSS was used and data were analyzed with the help of frequencies, figures, proportions, measures of central tendency, appropriate statistical test.

Observations

Table1: Age wise distribution

Age group (yrs)	No of patients	Percentage
<30	42	42.00
31-45	28	28.00
46-60	22	22.00
>60	8	8.00
Total	100	100.00

100 patients were enrolled into the study. Out of 100 patients, 42.00% patients belonged to less than 30 years, 28.00% patients were belonged to 31-45 years, 22.00%patients were belonged to46-60 years and 8.00% patients belonge to more than 60 years age respectively.

Table 2: Sex wise distribution

Sex	No of patients	Percentage
Male	58	58.00
Female	42	42.00
Total	100	100.00

Out of 100 patients, 58.00% patients were male and 42.00% patients were female.

Table 3: Site wise distribution

Site	No of patients	Percentage
Cervical Lymph node	61	61.00
Ileocaecal region	22	22.00
Breast	7	7.00
Anorectal region	10	10.00
Total	100	100.00

Out of 100 patients, 61.00% patients was cervical lymph node followed by 22.00% patients was ileocaecal region, 7.00% patients was breast and 10.00% patients was anorectal region.

Table 4. Clinical profile wise distribution

Clinical profile	No of patients	Percentage
Fever	72	72.00
Weight loss	69	69.00
Fatigue	58	58.00
Night sweats	46	46.00
Swelling	38	38.00
Constipation	19	19.00
Pain abdomen	16	16.00

Out of 100 patients, 72.00% patients was present with fever followed by 69.00% patients were present with weight loss, 58.00% patients were present with fatigue,46.00% patients were present with night sweats, 19.00% patients were present with constipation and 16.00% patients were present with pain abdomen.

Table 5. Co-morbid condition wise distribution

Co-morbid condition	No of patients	Percentage
Diabetes	16	16.00
Hypertension	11	11.00
HIV	1	1.00

Out of 100 patients, 72.00% patients was diabetic followed by 11.00% patients were hypertensive and 1.00% patients were HIV positive.

Table 6: Treatment wise distribution

Treatment	No of patients	Percentage
Medical management	76	76.00
Medical + Surgical management	24	24.00

Out of 100 patients, 76.00% patients were manage by medical treatment and 24.00% patients were manage both medical and surgical.

Table 7: Surgical management wise distribution

Surgical management	No of patients	Percentage
Resection-anastomosis	8	8.00
Stricturoplasty	6	6.00
Adhesiolysis	3	3.00
Loop ileostomy	3	3.00
Hemicolectomy	2	2.00
Fistulectomy	2	2.00

Out of 100 patients, 8.00% patients were manage by resection- anastomosis followed by 6.00% patients manage by stricuroplasty , 3.00% patients were manage by adhenolysis , 3.00% patients were manage by loop ileostomy and 2.00% patients were manage by hemicolectomy.

Discussion

The prevalence of Extra Pulmonary Tuberculosis (EPTB) is increasing over the last several years globally. Risk of EPTB is determined by the degree of

exposure to the pathogen and host immune factors like HIV, diabetes, malignancy, malnutrition, chronic renal disease, liver disease, post organ transplant etc. Identification of the risk factors that predispose to EPTB would allow for targeted strategies to prevent active tuberculosis infection and hence decrease the prevalence of EPTB.4 As per RNTCP, the prevalence of EPTB in non-HIV patients was 15%-20% 5 This increase in prevalence is due to availability of advanced diagnostic facilities at low cost in medical college settings and tertiary care referral centre.

100 patients were enrolled into the study. Out of 100 patients, 42.00% patients belonged to less than 30 years, 28.00% patients were belonged to 31-45 years, 22.00%patients were belonged to46-60 years and 8.00% patients belonged to more than 60 years age respectively. 58.00% patients were male and 42.00% patients were female.

The profile reflects on the prevalence of EPTB across all age groups and both sexes. No particular age group is free of EPTB. Although the major contribution to EPTB in our study comes from adolescent and adult age group. EPTB generally affects younger age group. The present study also corroborates this. Similar finding of involvement of younger age in EPTB has been observed in Minnesota in which 43% of the EPTB patients were in the age 15 - 24 years.6

In another study carried out in Fars Province, Southern Republic of Iran, highest number of EPTB patients were in the age 15-24 years (30.7%) followed by age group 25-34 (24.3%).7

A study from South Delhi, India also shows the similar finding; 38% of the patients were in the age 15-24 years followed by 25% in age 25-34 years. In a review of EPTB cases in the RNTPC in India, paediatric cases (0-14 years) comprised almost 15% of all EPTB cases.8

The findings are similar to studies conducted in different parts of world. In a study conducted in the largest private tertiary care hospital in Karachi, Pakistan, the mean age of patients was 34 ± 16.4 years and 75% were female patients. About two third of the patients were in the age group of 15 – 44 years.9

In another study from Yemen, 93% of the patients with EPTB were in the age group of 15 – 54 years and 62% were females.10

In our study out of 100 patients, 61.00% patients was cervical lymph node followed by 22.00% patients was ileocaecal region, 7.00% patients was breast and 10.00% patients was anorectal region. 72.00% patients was present with fever followed by 69.00% patients were present with weight loss, 58.00% patients were present with fatigue and 46.00% patients were present with night sweats.

Different studies show different pattern of EPTB site involvement. Some studies show pleural TB to be the most common type of EPTB whereas in other studies lymph nodes were found to involved most frequently. In the present study, pleural TB was found to be the most common type of EPTB. In a study in Pereira, Colombia, pleural TB (48%) was found to most frequent form of EPTB followed by Meningeal (18.6%) and lymph node TB (12.7%).7

A study from Madagascar also showed pleural TB (77.4%) to be the most common type of EPTB followed by lymph node TB (8.6%) and abdominal TB (7.2%).11

In a similar study from Hong Kong, the most common organ involved was pleura (41.2%) followed by lymph nodes (36.5%), genitourinary (4.5%) and gastrointestinal (3.5%).12

In a study from Karachi, Pakistan, lymph node TB and spine were the most common sites involved (60%)

followed by central nervous system, abdomen and musculoskeletal system.12

Conclusion

Cervical lymph node was most common extra pulmonary tuberculosis followed by ileocaecal region.

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