

ORIGINAL ARTICLE

Surgical Intervention of Extrapulmonary Tuberculosis Patients Admitted in Department of Surgery in 250 Bedded TB Hospital, Shyamoli, Dhaka

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Abstract:

Objective: The objective of the present study is to ascertain the role of surgical intervention in managing various types of extra pulmonary tuberculosis.

Methods: This was a prospective, cross-sectional, observational study conducted among the patients who were admitted in department of surgery in 250 Bedded TB Hospital, Shyamoli, Dhaka. The study period was July 2017 to June 2018.

Results: Maximum number of extra-pulmonary tuberculosis belong to cervical tubercular abscess which was about 68%. This was followed by axillary tubercular abscess (7%). Incision and drainage of abscess constitute highest number of surgical operation. It was about 85.22%. The second highest (7%) surgical intervention was Tube thoracostomy. 68.47% patients were female suffer from extra pulmonary tuberculosis. About 25.7% patients were in between 21-25 years age group. Next most affected group was 16-20 years

Conclusions: Improvement of diagnostic facilities and effective medical management along with surgical intervention are essential for early recognition and better treatment of EPTB cases.

Keywords: Surgical intervention, Extra-pulmonary, Tuberculosis

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Introduction:

Tuberculosis is a specific infectious disease caused by Mycobacterium tuberculosis. This disease primarily affects lungs parenchyma known as pulmonary tuberculosis- which is world-wide public health issue. Extra-Pulmonary Tuberculosis (EPTB)- refers to Any Bacteriologically Confirmed Or Clinically diagnosed case of TB. involving organs

other than lungs e.g. pleura (26%), lymph nodes (17%), genitourinary(15%), bones (14%), military (8%), peritoneum (4%) and gastrointestinal TB (1%) rarely breast, vascular and penile TB¹. EPTB constitutes about 15 to 20 percent of all cases of tuberculosis in immunocompetent patients and accounts for more than 50 percent of the cases in HIV positive individuals²⁻⁴. Lymph node

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tuberculosis constitutes 20-40% of extrapulmonary tuberculosis. It is more common in children and women than other forms of extrapulmonary tuberculosis and is more common in Asians and Pacific islanders. In developing and under developed countries, it continues to be caused by *Mycobacterium tuberculosis* and atypical mycobacteria are seldomly isolated. Commonly involved superficial lymph nodes (Scrofula or king's evil) include those in posterior and anterior cervical chains or the suprascapular fossae but others like submandibular, periauricular, inguinal and axillary groups may also be involved. Often, the lymphadenopathy is bilateral and noncontiguous¹. Intrathoracic (hilar, paratracheal and mediastinal in decreasing order) and abdominal lymph nodes are also involved in tuberculosis⁵. Among EPTB cases the lymphnode most commonly involved are the cervical nodes⁶⁻⁸. The disease usually responds to standard antituberculosis drug treatment. Biopsy and surgery is required to obtain tissue samples for diagnosis and for managing complication⁴. The objective of the present study is to ascertain the role of surgical intervention in managing various types of extra pulmonary tuberculosis.

Materials and Methods:

This was a prospective, cross-sectional, observational study conducted among the patients who were admitted in department of surgery in 250 Bedded TB Hospital, Shyamoli, Dhaka. The study period was July 2017 to June 2018. A detailed history, complete physical examination, various laboratory work and radiological studies were carried out. Histological confirmation was tried in every case. Diagnosis of TB was made by histological or cytological examination or demonstration of Acid Fast Bacillus. Informed consent was taken from the Patient or legal guardian. The cases were treated with anti tuberculosis chemotherapy (WHO Schedule) and the patients were followed up weekly, foreweekly and monthly after surgery during the period of chemotherapy. All findings were noted in case record form. The results were calculated and interpreted through appropriate statistical analysis with the help of a statistician and presented in tables.

Result:

Table 1 shows that maximum number of extrapulmonary tuberculosis belong to cervical tubercular abscess which was about 68%. This was followed by axillary tubercular abscess (7%).

Table-I

Distribution of extra-pulmonary tuberculosis.

Site	Number (%)
Cervical tubercular abscess	138 (68%)
Axillary tubercular abscess	14 (7%)
Tubercular plural effusion	11 (5.4%)
Tubercular hydro pneumothorax	3(1.47%)
Midline neck tubercular abscess	7(3.44%)
Skin tuberculosis	3(1.47%)
Submandibular tubercular abscess	1(0.49%)
Chest wall tubercular abscess	3(1.4%)
Breast TB	2(1%)
Potts TB back	1(0.49%)
Inguinal tubercular abscess	6(3%)
Cervical Lymphadenitis	5(2.46%)
Tubercular abscess in left elbow	1(0.49%)
Tubercular abscess in Right palmer surface	3(1.47%)
Wound debridement of post C-section	5(2.46%)
Total	203 (100%)

Table 2 reveals that Incision and drainage of abscess constitute highest number of surgical operation. It was about 85.22%. The second highest (7%) surgical intervention was Tube thoracostomy.

Table-II

Name of surgical intervention of extra pulmonary tubercular diseases.

Name	Number (%)
Incision and drainage of abscess	173 (85.22%)
Tube thoracostomy	14(7%)
Excisional biopsy of lymphnode	5(2.46%)
Excision of skin TB	3(1.47%)
Excisional biopsy of breast TB mass	2(1%)
Incision and drainage of potts diseases	1(0.49%)
Wound debridement	5(2.46%)
Total	203 (100%)

Table 3 show that 68.47% patients were female suffer from extra pulmonary tuberculosis.

Table-III

Distribution of patients according to sex

Sex	Number
Female	139 (68.47%)
male	64(31.52)
Total	203 (100%)

According to table 4, about 25.7% patients were in between 21-25 years age group. Next most affected group was 16-20 years.

Table-IV
Distribution of patients according to age

Age (years)	Number
0-5	1(0.49%)
6-10	1(0.49%)
11-15	14(7%)
16-20	50(24.63%)
21-25	52(25.7%)
26-30	34(16.8%)
31-35	23(11.33%)
36-40	5(2.46%)
41-45	2(1%)
46-50	6(3%)
51-55	3(1.47%)
56-60	2(1%)
61-65	3(1.47%)
66-70	5(2.46%)
71-75	2(1%)
Total	N= 203(%)

Discussion:

Extra pulmonary tuberculosis (EPTB) is a significant public health problem that represents a diagnostic challenge in Bangladesh. In this study The most frequent form of EPTB was tubercular abscess followed by tubercular pleural effusion. Among the tubercular abscess, cervical tubercular abscess was most frequent (68%). in our study 85.29% tubercular abscess was found in different parts of the body while in karim et al, 2006 it was 11.2 %. The number was significantly increased in this study. In kamal et al, 2016, about 21.5% were cervical tubercular abscess among cervical tubercular lymphadenitis patients. This study demonstrated that 5.4% was tubercular pleural effusion. While it was 8.47% in mohan et al, 2015 which was similar to this study.

In mohan et al, 2015 breast TB was constituted 13.55%. in comparison to this study which was 1%.

In present study 2.46% was cervical lymphadenitis. In Abdallah et al, 2015 it was 35.3%.⁹

In present study, highest surgical intervention was incision and drainage of abscess in different parts of the body that was 85.22% . In mohan et al,2015 it was 20.51% in psoas abscess.

Tube thoracostomy was done in 7% cases while it was 2.56% in mohan et al, 2015 .

In this study 68.47% EPTB patients were female which was 52.4% was in mohan et al, 2015 and 63.4% was in Mohammadien et al, 2017. About

58% were female and 45% were male in Karim et al in 2015. In most of the patients (56.29%) were in age group 21-40 years where it was 67.8% in mohan et al,2015.

Conclusion:

EPTB is major health problem though it is not communicable disease. EPTB should be taken serious as pulmonary tuberculosis. Improvement of diagnostic facilities and effective medical management along with surgical intervention are essential for early recognition and better treatment of EPTB cases.

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