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Research Article

A PROSPECTIVE STUDY ON TUBERCULAR FISTULA IN ANO AND ITS MANAGEMENT

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ABSTRACT

This prospective study aimed at to substantiate the importance of clinical diagnosis and medical management of tubercular fistula by antitubercular drugs. It is an important clinically in developing countries like India. Diagnosis of TB fistula is depends upon local and systemic clinical presentation. 25 patients of fistula in ano suspected to be of tubercular origin underwent histopathology of fistulous tracks and an 8 week therapeutic trial of antitubercular treatment after getting an informed consent. Though biopsy showed positive evidence of tubercular pathology only in 24 (96%) cases, therapeutic trial showed improvement in local and systemic features in 24 cases and cured after 18 months of anti tubercular treatment.

SUMMARY: Anti tubercular treatment is the mainstay of treatment in TB fistula with a minimum duration of 18–24 months owing to the recurrent and relapsing nature of disease.

KEYWORDS: Tubercular fistula in ano, Anti tubercular treatment.

INTRODUCTION

According to WHO, Nearly 28.2 lakh people got TB in India in 2022 and contribute global burden is 27%, nearly 4.3 million people fell ill with TB and estimated 700 000 died (excluding HIV+TB mortality) because than half of global TB deaths estimated at 1.3 million for the year.[1] Tubercular manifestations can be of pulmonary (PTB) and extra pulmonary (EPTB). Though pulmonary infections are more commonly encountered, Extrapulmonary TB (EPTB), more than 20% of the TB burden in India, affect communities across India (2023),[2] Lymph nodes, meninges, kidney, spine and growing ends of bones are common sites of EPTB; pleura, pericardium, peritoneum, liver, gastrointestinal tract genitourinary tract and skin may also be involved[3] 1–3% of GI tuberculosis is extrapulmonary cases,[4] Tuberculosis of anoperineal is often in the form of anorectal abscesses, some cases with anal stenosis. TB is often a neglected cause of anorectal sepsis, usually remains unrecognized leading to recurrence of anal fistulae even after multiple surgeries. Although fistula in ano is a surgical disease, can be managed effectively by proper antitubercular chemotherapeutic treatment.

AIMS & OBJECTIVE

The aim of present research was to study the effect of Anti-tubercular drugs for 18-24 month in treatment and management of fistula in ano.

MATERIALS & METHOD

Study Design: Interventional Cross Sectional Study.
Place of Research: Department of surgery, S. S. M. C. and hospital, Jabalpur (M.P.)
Study Period: January 2021 to June 2022.18-24 months.
Study Subjects: 25 patients, age group 18 to 70.
Inclusion Criteria: All 25 Patients of age group 18 to 70, of tuberculosis and extra pulmonary tuberculosis and may have positive past history of antitubercular treatment.

EXCLUSION CRITERIA

Patients associated with other respiratory disorders, jaundice, diabetes, hypertension and stress related diseases.

METHODOLOGY

This prospective study included 25 patients of tubercular fistula in ano who attended the Ano-rectal clinic at S. S. M. C and hospital, Jabalpur (M.P.) from January 2021 to June 2022. There are no specific symptomatologies or investigative findings attributed to tubercular fistula in ano and so, the diagnosis was based on clinical grounds, both on local as well as systemic presentation. Non-crypto glandular origin, recurrent nature, multiple fistulae not linked to each other, with thin seous discharge, undermined edges of external opening, progressive anorectal stenosis and inguinal lymphadenopathy arouse suspicion of tubercular fistula in ano (Table 1). Common symptoms like low grade fever, in the evening hours, anorexia and weight loss with anemia are the other features however all these symptoms were not present in all cases. [5][6] All patients underwent routine hematological investigations which included hemogram with ESR, blood sugar levels, liver function tests, serum urea, serum creatinine and serological tests for HIV and HBsAg status. Digital chest radiography and Mantoux testing was done. Sigmoidoscopy was performed to rule out inflammatory and other bowel pathologies. In addition, biopsy of the tissue excised from the core of the fistulous track was sent for histopathological examination. After confirming the diagnosis by histopathology, antitubercular treatment was started according to body weight on daily dosage pattern. The regime is shown in Table 2. In cases, where the histological findings were not suggestive of tubercular pathology but the clinical sign and symptoms were in agreement of tuberculosis, a therapeutic trial of anti-tubercular treatment (ATT) was started for 8 weeks duration with 6 drugs (Table 3) and was continued or ceased based on the response of the patient. Informed consents were taken from all patients prior to the treatment. Cessation of treatment was decided on the basis of healing of fistula in terms of ano discharge as well as improvement in systemic complaints and weight gain and ESR.

Table No. 1: Showing basal values and effects of Antitubercular treatment(A.T.T.) on Mantoux test, seous discharge from Fistula in ano, pathological lesion complain of low grade fever and on ERS level *with their Mean & Standard Deviation and p value* in study group.

Parameters	Before Tratment	Effect of A.T.T. for 18 to 24 month	P-value
Seous discharge	Present	NO discharge	
Seous discharge with anorectal stenosis	Present	Disappear	
Lymphadenopathy	Rubbery in consistency & large in size	Normal consistency & Normal size	
Mantoux test	Positive	Negetive	
Fever	Low grade	Normal tenpreture	
ESR	157.6 ± 10.48	9.47± 1.47	(p<0.000)

Table No. 2: Showing Regime of antitubercular treatment for tubercular fistula in ano.

Phase	Duration (months)	Drugs (dose)
Intensive (IP)	3	Isoniazid (H; 5mg/kg), rifampicin (R; 10mg/kg), pyrazinamide (Z; 25mg/kg), ethambutol (E; 15mg/kg), streptomycin (S, 750mg),
Continuation (CP)	12-18	HRZE

Table No. 3: Showing percentage Fistula in ano with their specificity.

Recurrent fistula	62%
Anal stenosis	38%
Positive past history of antitubercular treatment	24%
Patients had symptoms like evening rise of temperature, anorexia and weight loss.	40%

RESULT

The study included 25 males with mean age of 40.6 years (range 18–70 years).

Sigmoidoscopy did not reveal the presence of inflammatory bowel disease (IBD) in any of the cases. 6 (24%) patients had a positive past history of antitubercular treatment for 6–9 months for pulmonary tuberculosis with chest radiographs showed evidence of previous pulmonary tubercular involvement. ESR was raised in all cases with an average 157.6 ± 10.48 mmat end of 1st hour by Westergren method. Mantoux test was positive in 8 (32%) patients with more than 15 mm induration size measured after tuberculin injection. On histopathological examination of fistulous track, 13 (52%) cases showed presence of granulomatous 21esion with necrosis and Langhans giant cells, thus confirming the diagnosis of tuberculosis and hence, ATT was started in them. Among the biopsy negative cases, an 8 week therapeutic trial of ATT was started. Two patients did not respond to the therapeutic trial. Cases were managed by surgical intervention and medicated seton (ksharsutra) therapy. The remaining ten patients responded to ATT and thus, a total of 23 (92%) cases underwent and completed the 6 months intensive phase (IP) schedule. During the continuation phase (CP), 2 patients discontinued the treatment themselves at the end of 6 months and 8 months due to adverse reactions like arthralgia, lethargy, nausea, vomiting etc. and did not turn up for further follow up, however their fistulous symptoms were relieved and completed a course of ATT for 18 month In the rest 23 (92%) cases, and 2 patients underwent a 12 month CP The mean ESR of all patients 157.6 ± 10.48 mm at end of 1st hour and after taking 18 -24 month of treatment the mean ESR was 9.47± 1.47, statically highly significant ($p<0.000$)

DISCUSSION

As the incidence of primary GIT tuberculosis has declined due to the preferred use of pasteurized milk, tuberculosis of anal region is usually secondary to a primary focus often pulmonary.[6] The usual cause of infection in anorectal region may be due to swallowing of infected sputum with tubercular bacilli which may enter the anal or perianal tissue through a minute abrasion in anal canal. And direct inoculation of tubercle bacilli during anal toilet on excoriations or cracks in the anal or perianal skin from the patient's contaminated finger. Rarely, a hematogenous or lymphatic spread may also occur in the perianal or ischiorectal tissues.[7] The disease may be in forma of fistulae, perianal or mucosal ulcerations, firm and annular strictures or submucosal nodule with ulceration.[8] Suppurations and fistulae are, most frequently occurred.[9] EPTB should be diagnosed bacteriologically, histopathologically and on clinical grounds,[10] A high index of clinical understanding of both local and systemic features is required for making a diagnosis of tubercular fistula. Common features like anorexia, fever, weight loss etc. may not always be present.[6] Only 32% patients presented with such symptoms in this study. The diagnosis can be confirmed by positive Mycobacterium tuberculosis (MTB) culture in the pus sample. Generally takes about 2–3 months to obtain the culture results which may delay the commencement of treatment. MTB culture is difficult in cases with anorectal stenosis with no or little discharge. So, the diagnosis depends mainly upon the histopathological Presence of giant cell (Langhans type) granulomas with epitheloid cell infiltration, caseating necrosis and demonstration of AFB are positive histological evidences but these may not be always present and a low host immunity may result more inflammatory or suppurative response on histological findings.[11] Biopsy may be repeated in some cases as tuberculous lesions may be submucosal section studied.[12] In the present study no histological evidence found in 48% cases but a therapeutic trial of ATT showed successful results which approved the diagnosis and the treatment was continued. The value of Mantoux test is limited in adults in India as about 40% of the adult population is infected with TB.[13] The role of blood based antibody tests such as TB Gold and TB platinum is questionable.[14] Nucleic acid amplification tests (NAAT) like polymerase chain reaction (PCR) testing using pus and tissue specimen may be useful in rapid detection of the disease but the sensitivity is low and variable in EPTB case and multiple sample testing.[11], WHO endorsed the use of Xpert MTB/RIF assay, for extrapulmonary cases, which allows for rapid detection of MTB DNA along with confirmation of rifampicin resistance.[15] MRI and Transrectal ultrasonography may be helpful for extent of disease while.[16, 17] The issue of the ideal regimen and duration of treatment in EPTB is yet to be resolved. Though a 6 months ATT course (2 months IP with HRZE and 4 months CP with HR) is recommended in all new severe forms of EPTB (which includes GI tuberculosis),[18, 19] the duration of treatment was increased but was not fixed and decided on the basis of clinical response of the patient because in EPTB cases, each patient is needed to be assessed individually and treatment duration may need to be extended.[20] IP was continued for 6 months and after careful assessment, the CP was started. And may be extended by three to six month in special situations like bone and joint TB, spinal TB with neurological involvement, etc.[21] Tubercular fistulae are also similar to these special situations due to factors like slow response to treatment and tendency for relapse or recurrence. Hence, an extension of CP may be done on the basis of clinical assessment. The duration may be increased up to 24 months or till satisfactory clinical response is achieved. Recent guidelines under revised national tuberculosis control programme (RNTCP) also advocates for daily regimen.[21] There are no clear cut guidelines for end point of treatment in EPTB cases; however, in cases of tubercular fistula, improvement in systemic features, weight gain and healing of fistula may be taken as the end point of treatment.

CONCLUSION

Diagnosis of tubercular fistula is still a big challenge and it is difficult to establish in a fair number of cases despite of available diagnostic tools. It is primarily a medical condition and surgical intervention is seldom required. ATT should not be initiated merely on the basis of recurrent nature of disease and there should be adequate clinical evidence and/or investigative support to start antitubercular treatment for18–24 months. A high index of clinical suspicion, judicious use of diagnostic methods for confirmation of diagnosis and proper regime in terms of dose and duration with regular follow up and assessment are the keys to success.

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