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INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/21216
DOI URL: http://dx.doi.org/10.21474/IJAR01/21216

RESEARCH ARTICLE

BEYOND THE ORDINARY ATYPICAL MYCOBACTERIUM IN APPENDICULAR ABSCESS

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Manuscript Info

Manuscript History
Received: 16 April 2025
Final Accepted: 19 May 2025
Published: June 2025

Key words:-
Appendicitis, Appendix, Tuberculosis, Mycobacterium, NTM

Abstract

Appendicitis is most commonly associated with blockage of the appendiceal lumen due to fecoliths, lymphoid hyperplasia, or infection. Diagnostically and therapeutically, atypical mycobacterial infections—more frequently recognized as non-tuberculous mycobacteria (NTM) mycobacterial infections—rarely pose difficulties by causing appendicitis. Such environments include soil and water where organism s like Mycobacterium avium complex (MAC) and Mycobacterium fortuitum are found which can infect an immunocompromised host or, on rare occasions, an otherwise healthy person.NTM appendicitis is infrequently encountered and may present like classical acute appendicitis with right lower quadrant pain, fever, and high inflammatory markers. Granulomatous inflammation with acid-fast bacilli often goes unnoticed until histopathological examination integrates these findings. For me as a medical trainee, this case underscores the need to rule out rare causes of appendicitis in patients with unusual presentation or those who are immunosuppressed. Appen dectomy remains the treatment of choice in these patients; however, after confirming an Non-Tuberculous Mycobacterial infection, tailored therapy is warranted to avoid recurrence or systemic dissemination of the disease.Maintaining the differential diagnosis wide open permits us to note that although uncommon atypical mycobacteria it is important to highlight that every step needs be taken for proper diagnosis and management because no other need exists alongside histology and microbiology emphasis on precision seeking diagnosis without fail.

Introduction:-

Tuberculous appendicitis is one of the rare components of extra-pulmonary manifestation of Tuberculosis (EPTB) which does not have guideline on its management due to its rarity. It is a very rare clinical condition with an incidence reported to be <3% of the patients diagnosed with Tuberculosis (includes Pulmonary and extra-pulmonary manifestations). [1]

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First described in the year 1873 by Corbin, the incidence of Tuberculous appendicitis has changed less ever since. This fewer incidence points out to the challenges posed by the disease in prompy diagnosis and appropriate suitable management.

Patients who present with Tuberculous Appendicitis are indistinguishable from the non-tuberculous variant which is the most commonly seen in India. All these tuberculous variants of appendicitis can only be diagnosed based on the histological examination of the specimen and only further can be started on Anti-Tubercular Treatment (ATT).
It can occur as a primary or secondary infection. Commonly it is associated with ileo-caecal or peritoneal disease. Tuberculous appendicitis may be acute, chronic, acute on chronic or the latent type based on the virulence of the organism and the immune status of the affected individual.

Case Study

Here is a male patient aged 39 years who presented to the hospital with complaints of Pain Abdomen since 3 days.
On Examination, patient was afebrile and his vitals stable.

Per Abdomen: Soft, Tenderness present in Right Iliac Fossa with no evidence of Guarding or Rigidity
Bowel sounds were present

Sonological Findings:

Ultrasound Abdomen: Features suggestive of Acute Appendicitis

Laboratory Tests:

1. Hb: 10.7g%
2. TLC: 16,700 cells/mm3
3. Neutrophils: 60%
4. Lymphocytes: 40%
5. ESR: 120mm/hr

Patient was then taken up for Open Appendicectomy under Spinal Anaesthesia. Intra-operatively, retrocecal pus was noted with inflamed appendix. Appendicectomy was performed and pus was sent for Culture and sensitivity which revealed ZN staining positive. Further testing with CBNAAT revealed the absence of Mycobacteria and further tesing revealed the presence of Atypical mycobacterium. Patient was then started on Anti-Tubercular treatment in accordance with NTEP guidelines and has been asymptomatic ever since.

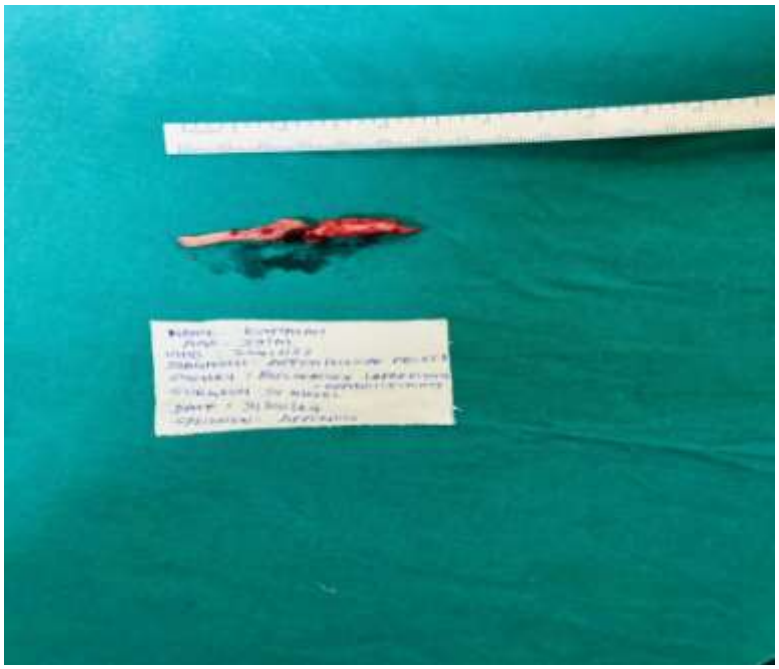

Fig. 1:- Appendix Specimen.

Fig.2:- Intra-op Finding of retro-ceacal pus.

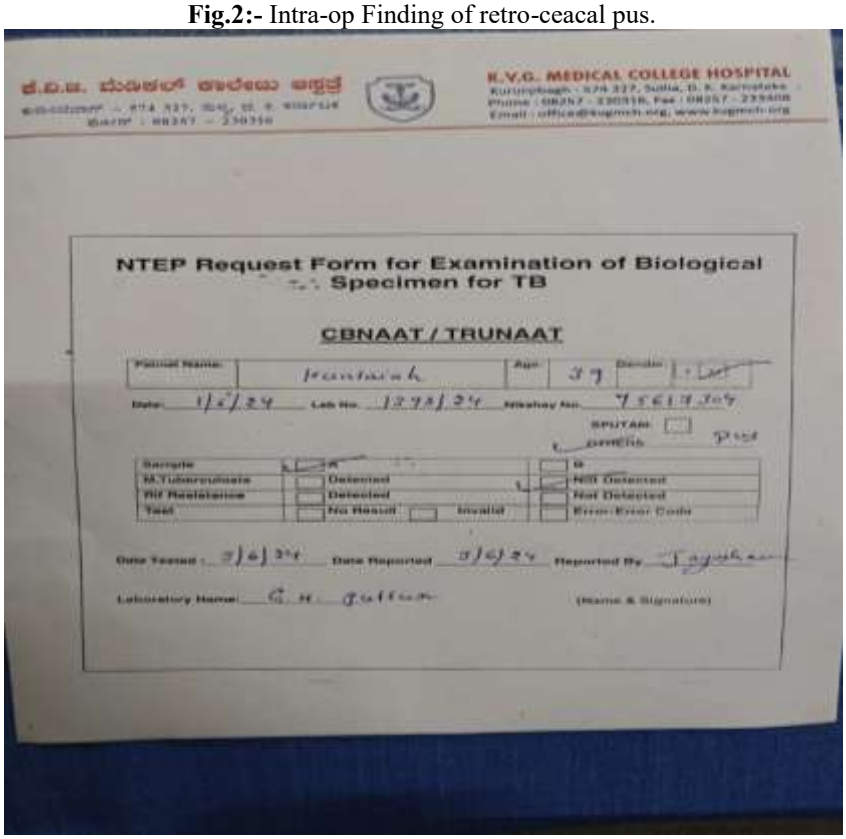

Fig.3:- Lab report of M.TB testing.

Discussion:-

The pathophysiology of Tuberculous appendicitis is poorly understood and, in most cases, uncertain. In most cases, as is the notion that tuberculosis of the viscera is due to secondary infection, with the primary being pulmonary tuberculosis where the swallowed infected sputum is the most definite cause and the most probable risk factor in developing of this disease.

Due to the lack of appropriate diagnostic modalities and also due to the acute nature of the appendicitis, most of the cases are taken up for surgery on an emergency basis and hence the scope for pre-operative evaluation is very limited.

A high index of suspicion has to be kept in mind considering the endemicity of Tuberculosis and its rampant prevalence, and also special attention be paid to the duration of symptoms and clinical features which will be further strengthened by laboratory and radiological investigations.

Conclusions:-

As on date, there are no confirmed tests for the identification of Tuberculous appendicitis, in the pre-operative period.

Intra-operative diagnosis of Tuberculous appendicitis is also difficult. But in our case the presence of retro-caecal pus was a pointing index to the suspicion of tuberculous appendicitis.

A keen clinical suspicion is required in diagnosing tuberculous appendicitis and its appropriate management as there are no confirmatory tests available till date.

Also starting on ATT is the utmost important step in preventing the further dissemination of the disease in the affected individual thereby leading to increased morbidity and poor quality of life in the post-operative period.

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