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BALANCING AUTOIMMUNITY AND INFECTION: COEXISTENCE OF ILEOCAECAL TUBERCULOSIS AND SJÖGREN'S SYNDROME – A CASE REPORT AND REVIEW OF LITERATURE

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Abstract

Background: The coexistence of autoimmune disorders such as Sjögren's syndrome (SS) and infectious diseases like tuberculosis (TB) poses significant diagnostic and therapeutic challenges, especially in TB-endemic regions. Immunosuppressive therapy for SS increases TB reactivation risk, complicating management strategies.

Case Presentation: A 45-year-old female with SS presented with progressive lower abdominal pain. Imaging suggested appendicular inflammation; however, laparoscopy revealed an ileocaecal mass. Limited resection of the terminal ileum and proximal ascending colon was performed. Histopathology confirmed ileocaecal TB. The patient received anti-tubercular therapy alongside adjusted immunosuppressive treatment under multidisciplinary care.

Conclusion: This case underscores the importance of comprehensive screening for latent TB before immunosuppressive therapy, individualized perioperative immunosuppressive management, and multidisciplinary coordination in patients with overlapping autoimmune and infectious diseases.

Keywords

Sjögren's syndrome; Ileocaecal tuberculosis; Autoimmune disease; Immunosuppression; Multidisciplinary care

INTRODUCTION

Sjögren's syndrome (SS) is a chronic systemic autoimmune disorder characterized primarily by lymphocytic infiltration of exocrine glands, resulting in dry mouth and eyes. Its global prevalence is estimated between 0.03% and 0.5%, predominantly affecting middle-aged women (Fox RI, 2005) [1].

Tuberculosis (TB), caused by Mycobacterium tuberculosis, remains a global public health challenge with approximately 10 million new cases annually worldwide, especially in developing countries (World Health Organization, 2023) [2]. Immunosuppressive therapies used in autoimmune diseases increase the risk of TB reactivation and complicate clinical management (Houben & Dodd, 2016) [3].

The concurrence of SS and TB, although rare, requires careful diagnostic evaluation and tailored management. Immunosuppressive treatment in SS may exacerbate latent TB infection, leading to reactivation or dissemination. In this report, we present a patient with SS who developed ileocaecal TB mimicking appendicitis, managed successfully with surgical resection and multidisciplinary care.

Case Presentation

A 45-year-old female housewife from Thiruvallur, India, presented with complaints of dull aching pain in the lower abdomen localized to the right lumbar region for two months. The pain progressively worsened over the last two days and radiated to the back. There was no history of fever, vomiting, abdominal distension, or weight loss.

She was known to have Sjögren's syndrome and was on oral prednisolone. On examination, the patient was thin built, poorly nourished, conscious, oriented, and afebrile. Vital signs were stable. Abdominal examination revealed localized tenderness in the right lumbar region with normal bowel sounds.

Investigations:

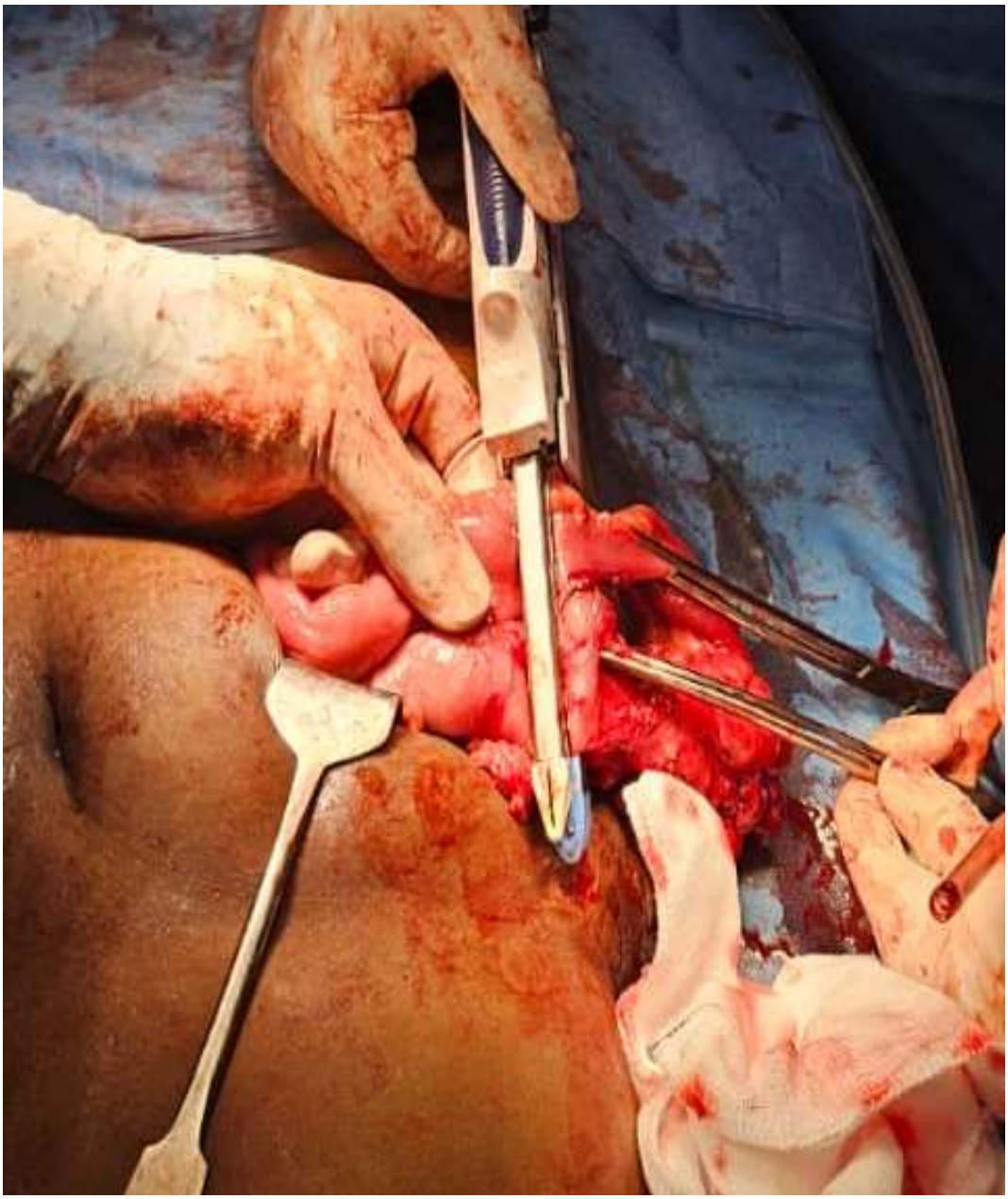
- Ultrasound abdomen showed few sub-centimetric prominent lymph nodes and inflammatory changes with fat stranding around bowel loops.

- Contrast-enhanced computed tomography (CT) abdomen revealed a fluid-filled, dilated appendix measuring approximately 12 mm in thickness and 2 cm in length with periappendiceal fat stranding, suggestive of appendicitis.

Surgical Intervention:

Based on imaging findings, laparoscopic appendectomy was planned on 21/06/2024. Intraoperatively, a mass was noted involving the ileocaecal region, and the terminal ileum, omentum, and appendix were not clearly visualized. Multiple enlarged mesenteric lymph nodes were encountered. Due to the extent of disease, a limited resection of the distal ileum and proximal ascending colon (~5 cm proximal to the ileocaecal junction) was performed, followed by side-to-side ileocolic anastomosis using the Barcelona technique.(Figure-1)

Figure-1

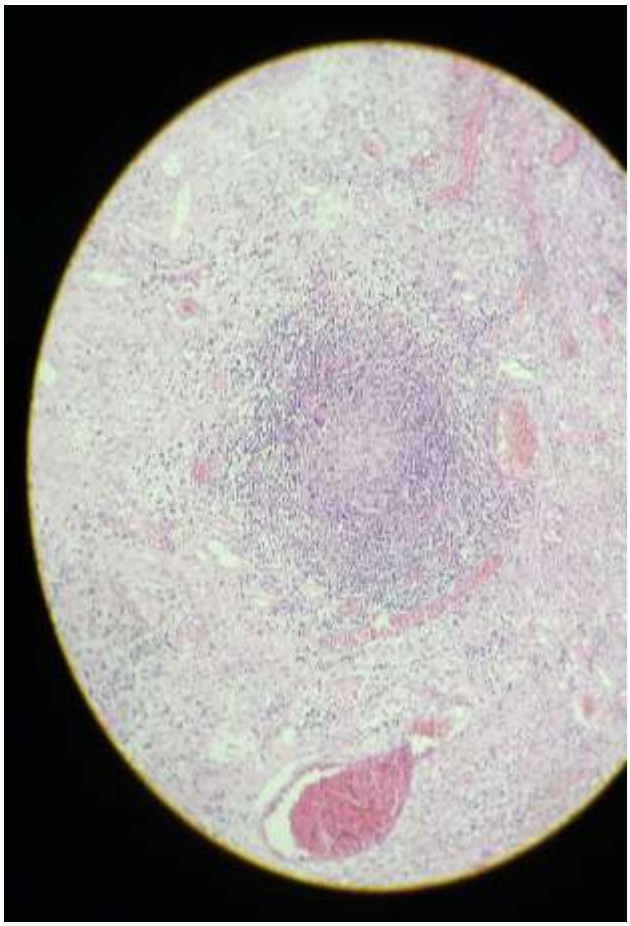


Histopathology:

Microscopic examination revealed caseating granulomatous inflammation consistent with tuberculosis. (Figure-2)

Figure-2

Postoperative Course and Management:



The postoperative period was uneventful. Oral intake was initiated on postoperative day (POD) 4, and the drain was removed on POD 10. The patient was discharged on POD 12 and started on standard anti-tubercular therapy (HRZE regimen) based on histopathology findings.

Multidisciplinary Care:

- Rheumatology adjusted immunosuppressive therapy, substituting hydrocortisone perioperatively and resuming oral prednisolone postoperatively to manage autoimmune disease while reducing infection risk.
- Pulmonology team closely monitored TB treatment, ensuring adherence and monitoring for adverse effects.

DISCUSSION

This case highlights the rare coexistence of SS and ileocaecal TB and the challenges posed by immunosuppression in managing both conditions.

Coexistence of SS and TB

Autoimmune diseases such as SS require immunosuppressive therapy to control systemic inflammation; however, these treatments increase susceptibility to infections including TB (Brassard et al., 2006) [4]. Reactivation risk is especially high in TB-endemic countries, warranting latent TB screening before starting immunosuppression (Solovic et al., 2010) [7].

Ileocaecal Tuberculosis

The ileocaecal region is the most common site of gastrointestinal TB, accounting for approximately 64% of abdominal TB cases (Sharma & Bhatia, 2004) [5]. Clinical presentation may mimic appendicitis, Crohn's disease, or malignancy, often leading to diagnostic delays. Surgical intervention remains the cornerstone for cases with obstructive symptoms, diagnostic uncertainty, or complications (Pujari et al., 2015) [6].

Management Considerations

Balancing immunosuppression to control SS while effectively treating TB is complex. A multidisciplinary approach is crucial to:

- Screen for latent TB before immunosuppressive therapy initiation.
- Adjust immunosuppressants perioperatively to reduce infection risk without triggering autoimmune flare-ups.
- Provide timely anti-tubercular therapy alongside immunosuppression, with close monitoring for adverse effects and drug interactions (Fujita et al., 2001; Jain et al., 2019) [8,9].

Literature Review

Few reports exist on the coexistence of SS and TB. Fujita et al. (2001) described pulmonary TB in a patient receiving corticosteroids for SS [8]. Jain et al. (2019) emphasized TB risk in autoimmune disease patients in India, advocating stringent screening protocols [9].

CONCLUSION

The coexistence of SS and TB requires a high index of suspicion and coordinated multidisciplinary care. This case underlines the need for latent TB screening in autoimmune patients, careful perioperative immunosuppressive management, and individualized treatment plans to optimize patient outcomes in regions with high TB prevalence.

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