RESEARCH PAPER

Abdominal Tuberculosis Masquerading as Carcinoma: A Diagnostic Pitfall – A Case Series from a Tertiary Care Centre in South India

M Gomathi*, M Rajasekar, E Krithikaa

Department of Surgery, Sri Venkateshwaraa Medical College Hospital & Research Centre, Ariyur, Puducherry, India

Corresponding Author email:

Received: 25th June 2026; **Revised:** 28th July 2026; **Accepted:** 10th October 2026; **Available Online:** 15th October 2026

ABSTRACT

Background

Abdominal Tuberculosis (ATB) remains one of the most challenging forms of extrapulmonary Tuberculosis due to its highly variable clinical presentation. In tuberculosis-endemic countries such as India, ATB frequently mimics gastrointestinal and peritoneal malignancies because of overlapping constitutional symptoms, radiological findings, and intraoperative appearances. Patients commonly present with weight loss, abdominal pain, anorexia, bowel disturbances, abdominal masses, ascites, or intestinal obstruction, often leading clinicians to suspect carcinoma. Failure to recognize this entity may result in unnecessary radical surgical procedures and delay in initiating anti-tubercular therapy.

Case Series

We present three patients who were initially diagnosed with abdominal malignancy based on clinical and radiological findings. The first patient presented with features suggestive of carcinoma of the ileocecal region, the second with suspected peritoneal carcinomatosis, and the third with presumed gastric carcinoma. Despite strong clinical suspicion of malignancy, histopathological examination in all three patients demonstrated caseating granulomatous inflammation consistent with abdominal tuberculosis. Appropriate anti-tubercular therapy was initiated following confirmation of diagnosis.

Discussion

These cases highlight the remarkable ability of abdominal tuberculosis to imitate gastrointestinal malignancies. Imaging modalities such as contrast-enhanced computed tomography and endoscopy are useful for identifying suspicious lesions but often lack specificity. Histopathological confirmation remains the gold standard for diagnosis. Early tissue diagnosis through image-guided biopsy or diagnostic laparoscopy can prevent unnecessary extensive resections and facilitate timely medical management.

Conclusion

Abdominal tuberculosis should always be considered in the differential diagnosis of suspected abdominal malignancy, particularly in tuberculosis-endemic regions. A high index of suspicion combined with early histopathological confirmation is essential to avoid diagnostic errors and improve patient outcomes.

Keywords: Abdominal tuberculosis, Extrapulmonary tuberculosis, Carcinoma mimic, Case series, Diagnostic laparoscopy, Histopathology

How to cite this article: Gomathi M, Rajasekar M, Krithikaa E., Abdominal Tuberculosis Masquerading as Carcinoma: A Diagnostic Pitfall – A Case Series from a Tertiary Care Centre in South India. Int J Drug Deliv Technol. 2026;16(89s): 1143-1153; DOI: 10.25258/ijddt.16.89s.119

Source of support: XX

Conflict of interest: XX

INTRODUCTION

Tuberculosis (TB) continues to be a major public health problem worldwide despite significant advances in diagnostic modalities and therapeutic strategies. (1) According to the World Health Organization (WHO), India bears the highest burden of tuberculosis globally, accounting for a substantial proportion of newly diagnosed cases each year.

Although pulmonary tuberculosis remains the most common presentation, extrapulmonary tuberculosis constitutes nearly 15–20% of all cases in immunocompetent individuals and an even higher proportion among immunocompromised patients. (2) Abdominal tuberculosis is one of the most frequently encountered forms of extrapulmonary TB and represents a significant diagnostic challenge because of its diverse clinical manifestations.(3)

Abdominal tuberculosis can involve the gastrointestinal tract, peritoneum, mesentery, lymph nodes, and solid abdominal organs either in isolation or in combination. The ileocecal region is the most commonly affected site owing to the abundance of lymphoid tissue, physiological stasis, and increased absorptive activity.(4) Patients may present with nonspecific symptoms including abdominal pain, anorexia, fever, weight loss, altered bowel habits, abdominal distension, intestinal obstruction, gastrointestinal bleeding, or an abdominal mass. Unfortunately, these manifestations frequently overlap with those of gastrointestinal malignancies, inflammatory bowel disease, and other chronic inflammatory conditions.(5,6)

The diagnosis of abdominal tuberculosis is often delayed because neither clinical findings nor radiological investigations are pathognomonic. Contrast-enhanced computed tomography may demonstrate bowel wall thickening, necrotic lymphadenopathy, ascites, omental thickening, or peritoneal nodules, all of which may be mistaken for advanced gastrointestinal carcinoma or peritoneal carcinomatosis. Similarly, endoscopic findings such as ulcerative, proliferative or stricture lesions may resemble colorectal or gastric carcinoma. Consequently, many patients undergo exploratory laparotomy or major oncological resections before the diagnosis is established.(7,8,9)

Histopathological examination remains the cornerstone of diagnosis. The presence of caseating granulomas with or without acid-fast bacilli strongly supports tuberculosis, although microbiological confirmation may not always be obtained. Diagnostic laparoscopy has emerged as a valuable minimally invasive tool for obtaining targeted biopsies, particularly in patients with inconclusive endoscopic or image-guided biopsies. Early tissue diagnosis not only prevents unnecessary radical surgery but also enables prompt initiation of anti-tubercular therapy, resulting in excellent clinical outcomes.(10, 11)

The burden of abdominal tuberculosis remains particularly significant in developing countries where tuberculosis is endemic. Therefore, surgeons and gastroenterologists must maintain a high index of suspicion when evaluating patients presenting with suspected gastrointestinal malignancy, especially younger individuals with constitutional symptoms, necrotic lymphadenopathy, segmental bowel involvement, or peritoneal disease without evidence of distant metastasis. (12, 13)

In this case series, we present three patients who initially appeared to have gastrointestinal malignancies but were ultimately diagnosed with abdominal tuberculosis on histopathological examination. Through these cases, we aim to emphasize the diagnostic challenges associated with abdominal tuberculosis, highlight the indispensable role of tissue diagnosis, and propose a practical diagnostic approach that may help avoid unnecessary radical surgical procedures in tuberculosis-endemic settings.

MATERIALS AND METHODS

Study Design and Setting

This retrospective case series was conducted in Department of General Surgery, Sri Venkateshwaraa Medical College Hospital & Research Centre, Ariyur, Puducherry. Three patients who presented with clinical and radiological features suggestive of abdominal malignancy but were subsequently diagnosed with Abdominal Tuberculosis on histopathological examination were included in this study.

DATA COLLECTION

Clinical data were obtained from hospital medical records, including demographic characteristics, presenting symptoms, laboratory investigations, radiological findings, endoscopic evaluation, operative findings, histopathological reports, treatment administered, and follow-up outcomes. The collected data were analysed descriptively to highlight the diagnostic challenges encountered in differentiating abdominal tuberculosis from gastrointestinal malignancy.

Inclusion Criteria

Patients with clinical suspicion of abdominal malignancy, radiological findings suggestive of gastrointestinal or peritoneal carcinoma and histopathological confirmation of abdominal tuberculosis

Exclusion Criteria

Patients with confirmed gastrointestinal malignancy, with incomplete clinical records, and patients without histopathological confirmation

ETHICAL CONSIDERATIONS

Patient confidentiality was strictly maintained. Informed consent for publication was obtained from the patients/guardians wherever applicable.

Institutional Ethics Committee approval was waived because this was a retrospective case series.

CASE SERIES

Case 1: Ileocecal Tuberculosis Mimicking Carcinoma Colon

A 32-year-old male presented to the Department of General Surgery with complaints of intermittent right lower abdominal pain, progressive weight loss, and altered bowel habits for **six months**. There was no significant past history of pulmonary tuberculosis, previous abdominal surgery or family history of gastrointestinal malignancy.

On physical examination, the patient was moderately built and nourished with stable vital signs. Abdominal examination revealed a firm, ill-defined, mildly tender mass in the right iliac fossa measuring approximately **4cm × 4cm**. There was no generalized peritonitis or clinically significant ascites.

Routine laboratory investigations revealed **Hb of 7.4g/dl, TLC of 12,000/microliter, ESR of 14, CRP positive.** Contrast-enhanced computed tomography (CECT) of the abdomen demonstrated circumferential thickening of the ileocecal region associated with enlarged mesenteric lymph nodes, raising suspicion of carcinoma of the cecum.

Colonoscopy revealed an Ulcero-nodular lesion involving the ileocecal junction. Multiple endoscopic biopsies were obtained; however, the histopathological findings were inconclusive and failed to establish a definitive diagnosis. (Figure 1)

Based on the clinical presentation, radiological appearance, and colonoscopic findings, a provisional diagnosis of carcinoma of the colon was made, and the patient was planned for surgical exploration. (Figure 2)

At laparotomy, dense adhesions involving the ileocecal region with marked inflammatory thickening were observed. No obvious liver metastases or peritoneal deposits suggestive of advanced malignancy were identified. A limited right hemicolectomy was performed because of the strong suspicion of malignancy and the inability to exclude carcinoma intraoperatively. (Figure 3)

Gross examination of the resected specimen showed proliferative thickening involving the ileocecal junction. Histopathological examination demonstrated multiple caseating epithelioid cell granulomas with Langhans giant cells, consistent with intestinal tuberculosis. No evidence of malignancy was identified.

The postoperative recovery was uneventful. Following confirmation of the diagnosis, the patient was referred to the Department of Respiratory Medicine and initiated on standard anti-tubercular therapy according to the National Tuberculosis Elimination Programme (NTEP) guidelines.

At subsequent follow-up, he demonstrated significant clinical improvement, with resolution of abdominal pain, improvement in appetite, gradual weight gain, and no evidence of disease recurrence or treatment-related complications.

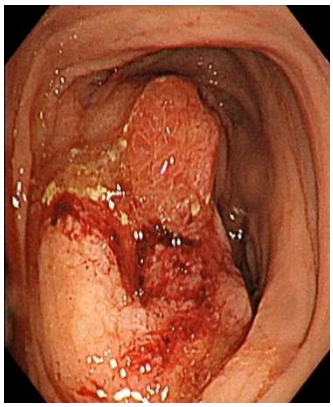


Figure 1: Colonoscopy showing Ulcero-nodular lesion at the Ileocecal junction

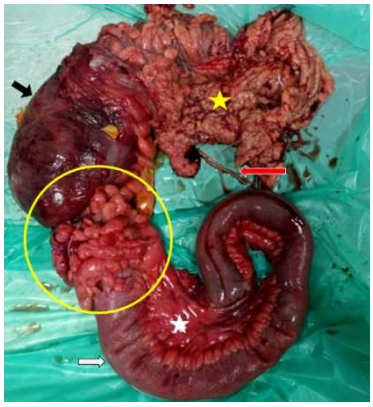


Figure 2: CECT Abdomen shows Ileocecal mass specimen shows proliferative thickening at the ileo-caecal junction (area within the yellow circle),

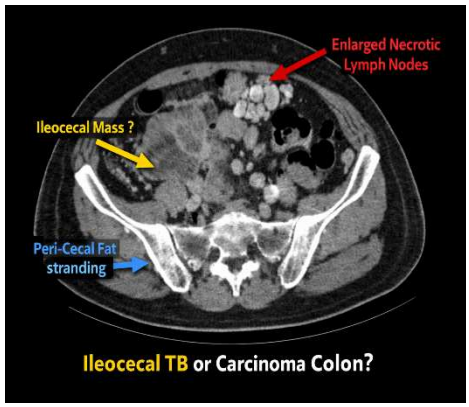


Figure 3: Right hemicolectomy ascending colon with gangrenous changes (Black arrow), Terminal

ileum (white arrow), Mesentery (white asterisk), Transverse Mesocolon (yellow asterisk)

This case highlights the importance of considering abdominal tuberculosis as a differential diagnosis in patients presenting with features suggestive of gastrointestinal malignancy, particularly in tuberculosis-endemic regions.

Case 2: Peritoneal Tuberculosis Mimicking Peritoneal Carcinomatosis

A 52-year-old male presented to the Department of General Surgery with progressive abdominal distension, diffuse abdominal pain, loss of appetite, and significant weight loss for **six months**. There was no history of previous tuberculosis, chronic liver disease, or known malignancy.

On examination, the patient appeared cachectic. Abdominal examination revealed generalized distension with shifting dullness suggestive of ascites. There was no palpable abdominal mass or organomegaly. Routine laboratory investigations showed **Hb of 8g/dl, TLC of 9,000/microliter, ESR of 12, CRP negative.**

Contrast-enhanced computed tomography (CECT) of the abdomen demonstrated moderate ascites with diffuse omental thickening (omental caking), multiple peritoneal nodules, and enlarged mesenteric lymph nodes, highly suggestive of peritoneal carcinomatosis. Diagnostic ascitic fluid analysis revealed an exudative effusion, while cytological examination was negative for malignant cells. Despite the negative cytology, the overall clinic-radiological picture strongly favoured disseminated intra-abdominal malignancy. **(Figure 4)**

The patient underwent diagnostic laparoscopy for tissue diagnosis. Intraoperatively, straw-coloured ascitic fluid, numerous whitish peritoneal tubercles, and diffuse omental thickening were observed. Because of dense adhesions and the need for adequate tissue sampling, the procedure was converted to an exploratory laparotomy. Multiple biopsies were obtained from the peritoneum and omentum. **(Figure 5, Figure 6)**

Histopathological examination demonstrated multiple caseating epithelioid granulomas with Langhans giant cells, confirming Peritoneal tuberculosis. No evidence of malignancy was identified.

Peritoneal Tuberculosis following diagnosis, the patient was started on standard anti-tubercular therapy under the National Tuberculosis Elimination Programme (NTEP). During follow-up, the patient showed marked improvement and complete recovery.

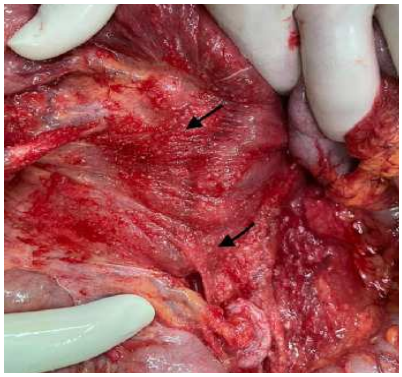


Figure 4: CECT Abdomen shows Ascites, omental caking + peritoneal nodules



Figure 5: Intra-Operative findings Straw-coloured fluid multiple

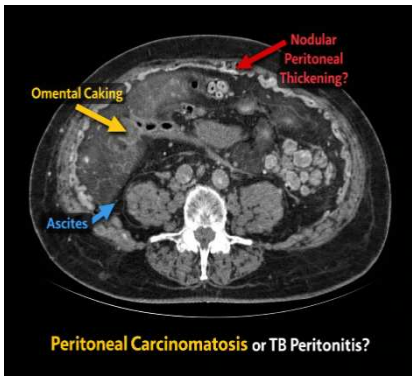


Figure 6: Intra-operative Peritoneal Tuberculosis

Case 3: Gastric Tuberculosis Mimicking Gastric Carcinoma

A 65-year-old male presented with epigastric pain, recurrent vomiting, early satiety, and progressive weight loss for **nine months**. There was no previous history of pulmonary tuberculosis or upper gastrointestinal surgery. Clinical examination revealed mild epigastric tenderness without a palpable abdominal mass. Laboratory investigations demonstrated **Hb of 6.4g/dl.**

Upper gastrointestinal endoscopy revealed an ulcero-proliferative lesion involving the stomach, raising strong suspicion for gastric carcinoma. Multiple endoscopic biopsies were obtained but failed to establish a definitive diagnosis. Contrast-enhanced computed tomography of the abdomen demonstrated

irregular gastric wall thickening with enlarged necrotic perigastric lymph nodes, further supporting the diagnosis of gastric malignancy. **(Figure 7, Figure 8)**

Considering the persistent suspicion of carcinoma despite inconclusive endoscopic biopsy, the patient underwent exploratory laparotomy. Intraoperatively, diffuse gastric wall thickening with dense perigastric adhesions was observed. No distant metastatic deposits were identified. Biopsies were obtained from the gastric wall and enlarged lymph nodes instead of proceeding with radical gastrectomy because of the uncertain diagnosis.

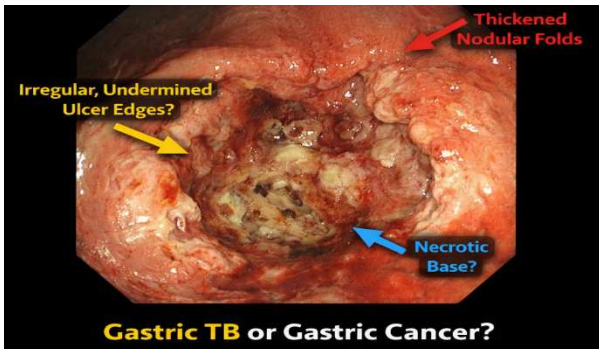


Figure 7: Endoscopy shows Ulcero-proliferative lesion thickening

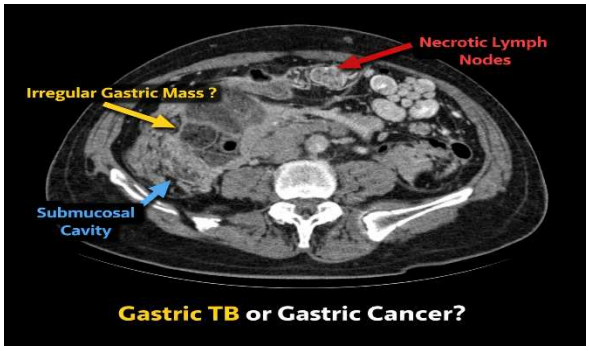


Figure 8: CECT Abdomen shows Gastric wall necrotic nodes.

Histopathological examination demonstrated caseating granulomatous inflammation, and Ziehl–Neelsen staining revealed acid-fast bacilli, confirming gastric tuberculosis. No evidence of malignancy was seen. **(Figure 9)**

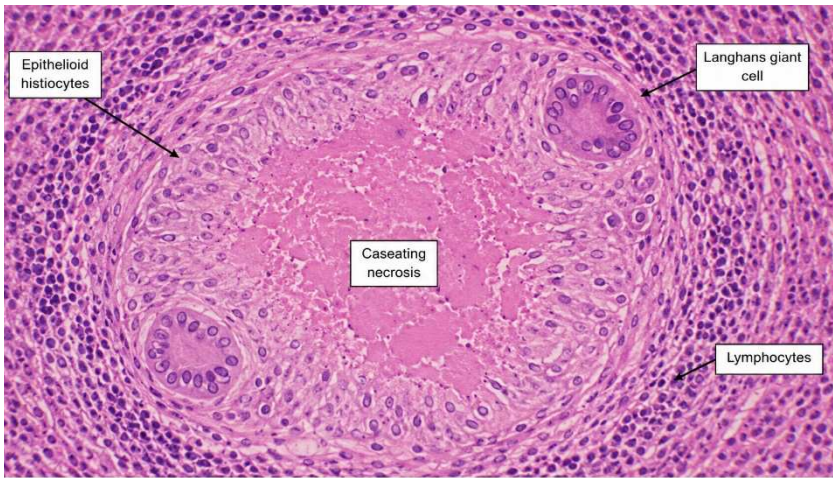


Figure 9: Histopathological section shows central caseating necrosis, with peripheral lymphocytes and Langhans Giant cells- features consistent with Tuberculosis

The patient was subsequently commenced on Anti-Tubercular Therapy with significant clinical improvement. Symptoms gradually resolved during follow-up and nutritional status improved without the need for major gastric resection. The comparison of cases is given in **Table 1**

Table 1. Clinicopathological Characteristics of Patients with Abdominal Tuberculosis Masquerading as Gastrointestinal Malignancy

Variable	Case 1	Case 2	Case 3
Age/Sex	32/M	52/M	65/M
Presenting complaints	Intermittent right lower abdominal pain, progressive weight loss, altered bowel habits	Progressive abdominal distension, diffuse abdominal pain, loss of appetite, significant weight loss	Epigastric pain, recurrent vomiting, early satiety, progressive weight loss
Duration of symptoms	6 months	6 months	9 months
Relevant comorbidities	Nil	Nil	Nil
Clinical examination findings	Pallor, right iliac fossa tenderness	Pallor, abdominal distension with shifting dullness suggestive of ascites	Pallor, epigastric tenderness
Haemoglobin(g/dL)	7.4	8.0	6.4
CECT abdomen findings	Ileocecal mass with enlarged necrotic lymph nodes	Ascites, Omental caking, Peritoneal nodules	Gastric wall thickening, necrotic lymph nodes
Endoscopic findings	Colonoscopy showed Ulcero-nodular lesion	Not performed	Ulcero-proliferative lesion
Provisional diagnosis	Carcinoma Cecum	Peritoneal Carcinomatosis	Gastric Carcinoma
Diagnostic/Surgical procedure	Limited Right Hemicolectomy	Diagnostic Laparoscopy converted to Exploratory Laparotomy with Biopsy	Exploratory Laparotomy with Biopsy
Intraoperative findings	Dense adhesions, thickened Ileocecal region	Multiple peritoneal tubercles with ascites and omental thickening	Thickened stomach, dense adhesions
Histopathological findings	Caseating granulomas	Granulomatous inflammation with Caseation	Caseating granulomatous inflammation with Langhans giant cells, AFB +ve
Final diagnosis	**Ileocecal Tuberculosis**	**Peritoneal Tuberculosis**	**Gastric Tuberculosis**
Definitive treatment	Anti-tubercular therapy (ATT)	Anti-tubercular therapy (ATT)	Anti-tubercular therapy (ATT)
Outcome/Follow-up	Clinical improvement following ATT	Clinical improvement following ATT	Clinical improvement following ATT

Abbreviations*:* ATT- Anti-tubercular therapy; CECT- Contrast-enhanced computed tomography.

DISCUSSION

Abdominal tuberculosis (ATB) remains one of the most challenging forms of extrapulmonary tuberculosis because of its varied clinical manifestations and its close resemblance to intra-abdominal malignancies. Despite significant advances in imaging modalities and endoscopic techniques, distinguishing abdominal tuberculosis from gastrointestinal carcinoma continues to be difficult, particularly in TB-endemic countries such as India. Delayed diagnosis frequently results in unnecessary radical surgical procedures, increased morbidity, prolonged hospitalization, and delayed initiation of anti-tubercular therapy. (14, 15)

The gastrointestinal tract, peritoneum, mesentery, abdominal lymph nodes, and solid abdominal organs may all be involved in abdominal tuberculosis. The ileocecal region is the most commonly affected site, accounting for nearly 75% of intestinal tuberculosis cases. This predilection is attributed to physiological stasis, abundant lymphoid tissue, and increased absorptive activity within the terminal ileum and cecum. Consequently, patients commonly present with abdominal pain, altered bowel habits, weight loss, fever, anorexia, abdominal mass, intestinal obstruction, or gastrointestinal bleeding, features that substantially overlap with those of colorectal carcinoma. (16)

The first patient in our series presented with right iliac fossa pain, weight loss, altered bowel habits, and an ileocecal mass on imaging, all of which strongly suggested carcinoma of the colon. Colonoscopic biopsy failed to establish a definitive diagnosis, ultimately necessitating surgical exploration. Histopathological examination demonstrated caseating granulomatous inflammation, confirming ileocecal tuberculosis. Similar diagnostic dilemmas have been described which reported intestinal tuberculosis masquerading as colonic carcinoma and emphasized the limitations of endoscopic biopsy due to superficial tissue sampling. These findings highlight the importance of considering tuberculosis as a differential diagnosis in young patients presenting with ileocecal lesions, particularly in endemic regions. (17)

Peritoneal tuberculosis is another well-recognized diagnostic challenge. Radiological findings such as ascites, omental caking, peritoneal thickening, and multiple nodules closely resemble peritoneal carcinomatosis arising from gastrointestinal or ovarian malignancies. In our second patient, computed tomography demonstrated diffuse omental thickening with ascites and peritoneal nodules, leading to a provisional diagnosis of peritoneal carcinomatosis. Ascitic fluid cytology was negative for malignant cells but remained insufficient to establish the diagnosis. Diagnostic laparoscopy revealed multiple peritoneal tubercles, and histopathological examination confirmed tuberculosis. Similar observations have been reported which concluded that diagnostic laparoscopy with targeted biopsy offers excellent diagnostic accuracy in patients with unexplained ascites and suspected peritoneal tuberculosis. (18)

Gastric tuberculosis is an uncommon manifestation of abdominal tuberculosis, accounting for less than 1% of gastrointestinal tuberculosis cases. The rarity of gastric involvement is attributed to the bactericidal properties of gastric acid, paucity of lymphoid tissue within the stomach, and rapid gastric emptying. Consequently, gastric tuberculosis is seldom considered in the differential diagnosis of gastric malignancy. Our third patient presented with epigastric pain, vomiting, early satiety, and radiological findings suggestive of gastric carcinoma. Endoscopic biopsy was inconclusive, whereas histopathological examination following exploratory surgery demonstrated caseating granulomas with acid-fast bacilli. Previous case reports have similarly described gastric tuberculosis presenting as ulcero-proliferative lesions indistinguishable from gastric carcinoma, emphasizing the necessity of obtaining adequate tissue before considering radical gastrectomy. (19, 20)

The present case series demonstrates that imaging findings alone are insufficient for differentiating abdominal tuberculosis from malignancy. Contrast-enhanced computed tomography remains an invaluable investigation for identifying bowel wall thickening, necrotic lymph nodes, ascites, and peritoneal disease. However, these findings lack specificity. Likewise, endoscopic appearance of ulcerative, stricturing or proliferative lesions cannot reliably distinguish tuberculosis from carcinoma or Crohn's disease. Histopathological examination therefore remains the gold standard for diagnosis. The demonstration of caseating granulomas, Langhans giant cells, and acid-fast bacilli strongly supports tuberculosis, although microbiological confirmation may not always be achieved.

Table 2. Clinical and Radiological Features Differentiating Abdominal Tuberculosis from Gastrointestinal Malignancy

Feature	Abdominal Tuberculosis	Gastrointestinal Malignancy
Age	Younger or middle-aged patients	Usually older patients
Constitutional symptoms	Fever, night sweats, weight loss are common	Weight loss common; fever and night sweats are uncommon

Feature	Abdominal Tuberculosis	Gastrointestinal Malignancy
Clinical presentation	Chronic abdominal pain, altered bowel habits, abdominal distension	Progressive abdominal pain, bleeding, obstruction, palpable mass
Bowel involvement	Segmental involvement, predominantly ileocecal region	Localized focal mass lesion
Lymph nodes	Necrotic lymph nodes with central low attenuation and rim enhancement	Solid enlarged lymph nodes without central necrosis
Peritoneal involvement	Smooth peritoneal thickening with multiple small nodules	Irregular peritoneal thickening with carcinomatosis
Ascites	High-protein, loculated or septate ascites	Malignant ascites, often associated with peritoneal metastases
CECT findings	Concentric bowel wall thickening, necrotic lymphadenopathy, peritoneal nodules	Irregular enhancing mass lesion with metastatic lymphadenopathy
Endoscopic appearance	Ulcerative or ulcero-proliferative lesions mimicking malignancy	Malignant ulcerative or proliferative growth
Histopathological findings	Caseating epithelioid granulomas with Langhans giant cells ± acid-fast bacilli	Malignant cells with features of adenocarcinoma or other malignancy
Definitive diagnosis	Histopathological confirmation of tuberculosis	Histopathological confirmation of malignancy
Primary treatment	Anti-tubercular therapy (ATT); surgery reserved for complications	Surgical resection with or without chemotherapy/radiotherapy

Abbreviations: ATT, Anti-tubercular therapy; CECT, Contrast-enhanced computed tomography.

An important lesson derived from our cases is the necessity of obtaining tissue diagnosis before undertaking definitive oncological surgery whenever feasible. Image-guided biopsy, endoscopic biopsy, endoscopic ultrasound-guided sampling, or diagnostic laparoscopy should be considered early in patients presenting with atypical clinical features or inconclusive investigations. Diagnostic laparoscopy not only permits direct visualization of peritoneal pathology but also facilitates targeted biopsy, thereby substantially improving diagnostic accuracy while reducing unnecessary laparotomies. The clinical and radiological features for differentiation is listed in Table 2.

Delayed diagnosis of abdominal tuberculosis can result in significant morbidity and may expose patients to unnecessary radical surgical procedures. Such delays increase the risk of disease progression, leading to complications such as intestinal obstruction, perforation, fistula formation, intra-abdominal abscesses, malnutrition, and prolonged hospitalization. Furthermore, delayed diagnosis may adversely affect postoperative recovery and increase healthcare costs.

Based on our experience, we propose a diagnostic approach for surgeons evaluating patients with suspected abdominal malignancy. (Figure 10) Patients presenting with constitutional symptoms, younger age, necrotic lymphadenopathy, segmental bowel involvement, peritoneal nodules, or absence of distant metastasis should raise suspicion for abdominal tuberculosis.

In tuberculosis-endemic regions, maintaining a high index of suspicion and obtaining early histopathological confirmation through image-guided biopsy or diagnostic laparoscopy can facilitate timely initiation of anti-tubercular therapy, prevent avoidable surgical morbidity, and improve overall patient outcomes. Whenever these features are present, every effort should be made to obtain histopathological confirmation before proceeding to radical surgical resection.

This approach is particularly relevant in countries with a high burden of TB, where delayed recognition may

expose patients to avoidable morbidity. It emphasizes early recognition of tuberculosis-associated red flags and obtaining tissue diagnosis before radical oncological surgery whenever feasible.

Although this study includes only three patients, it illustrates three distinct clinical presentations of abdominal tuberculosis that closely simulated carcinoma involving the colon, peritoneum, and stomach. The diversity of presentation reinforces the need for heightened clinical suspicion among surgeons, gastroenterologists, radiologists, and pathologists.

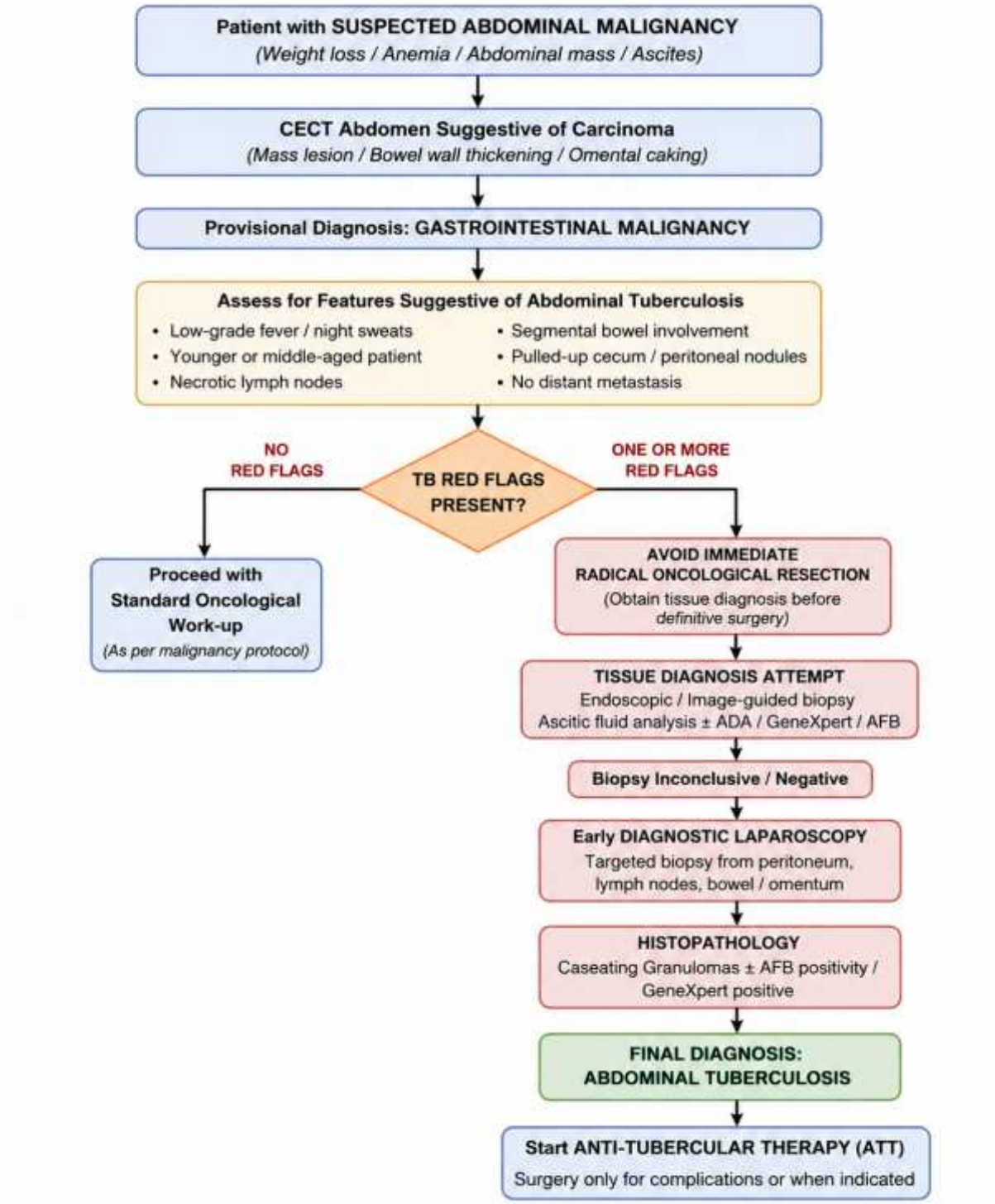


Figure 10. Proposed diagnostic algorithm for the evaluation of patients with suspected abdominal malignancy and possible abdominal tuberculosis

LIMITATIONS

The present study has certain limitations. As a retrospective case series from a single tertiary care centre, it includes a small number of patients, limiting the generalizability of the findings. Complete clinical and laboratory data were not uniformly available for all cases because of the retrospective nature of the study. In addition, the absence of a comparison group precludes statistical analysis or assessment of diagnostic accuracy. Nevertheless, the strength of this case series lies in highlighting the diverse presentations of abdominal tuberculosis masquerading as gastrointestinal malignancy and emphasizing the importance of early tissue diagnosis in preventing unnecessary radical surgery. Further multicentre studies with larger sample sizes are warranted to validate the proposed diagnostic approach.

CONCLUSION

Abdominal tuberculosis remains an important differential diagnosis in patients presenting with clinical and radiological features suggestive of gastrointestinal malignancy, particularly in tuberculosis-endemic regions. The three cases presented in this series demonstrate the remarkable ability of abdominal tuberculosis to mimic carcinoma involving the ileocecal region, peritoneum, and stomach.

Although modern imaging techniques facilitate early detection of abdominal pathology, they often fail to reliably differentiate tuberculosis from malignancy. Histopathological examination remains the definitive diagnostic modality. Whenever feasible, image-guided biopsy, endoscopic biopsy, or diagnostic laparoscopy should be performed before undertaking radical oncological surgery, especially in younger patients or those with clinical features suggestive of tuberculosis.

Maintaining a high index of suspicion and obtaining early tissue diagnosis can prevent unnecessary extensive surgical procedures, reduce patient morbidity, and enable timely initiation of anti-tubercular therapy. Surgeons practicing in TB-endemic countries should always remember that **not every abdominal mass is malignant; Tuberculosis must remain an important diagnostic consideration.**

Informed Consent

Written informed consent for publication of clinical details and images was obtained from the patients. Patient confidentiality has been maintained throughout the manuscript.

Funding

No external funding was received for this study.

Conflict of Interest

The authors declare that there are no conflicts of interest.

REFERENCES

1. Sharma MP, Bhatia V. Abdominal tuberculosis. Indian J Med Res. 2004;120(4):305-315.
2. Kapoor VK. Abdominal tuberculosis. Postgrad Med J. 1998;74(874):459-467.
3. Marshall JB. Tuberculosis of the gastrointestinal tract and peritoneum. Am J Gastroenterol. 1993;88(7):989-999.
4. Horvath KD, Whelan RL. Intestinal tuberculosis: return of an old disease. Am J Gastroenterol. 1998;93(5):692-696.
5. Bhansali SK. Abdominal tuberculosis. Experiences with 300 cases. Am J Gastroenterol. 1977;67(4):324-337.
6. Fitzgerald JM, Menzies RI, Elwood RK. Abdominal tuberculosis: a critical review. Dig Dis. 1991;9(5):269-281.
7. Jakubowski A, Elwood RK, Enarson DA. Clinical features of abdominal tuberculosis. J Infect Dis. 1988;158(4):687-692.
8. Neyman EG, Georgiades CS, Fishman EK. Abdominal involvement in tuberculosis. Emerg Radiol. 2002;9(4):225-230.
9. Hassan I, Brilakis ES, Thompson RL, Que FG. Surgical management of abdominal tuberculosis. J Gastrointest Surg. 2002;6(6):862-867.
10. Sheer TA, Coyle WJ. Gastrointestinal tuberculosis. Curr Gastroenterol Rep. 2003;5(4):273-278.
11. Debi U, Ravisankar V, Prasad KK, Sinha SK, Sharma AK. Abdominal tuberculosis of the gastrointestinal tract: revisited. **World J Gastroenterol.** 2014;20(40):14831-14840.
12. Uygur-Bayramicli O, Dabak G, Dabak R. A clinical dilemma: abdominal tuberculosis. **World J Gastroenterol.** 2003;9(5):1098-1101.
13. Chen HL, Wu MS, Chang WH, Shih SC, Chi H, Bair MJ. Abdominal tuberculosis in southeastern Taiwan: 20 years of experience. **J Formos Med Assoc.** 2009;108(3):195-201.
14. Das CJ, Rednam N, Vora Z, Aggarwal A, Chandrashekhara SH, Kundra V. Abdominal visceral tuberculosis: a malignancy mimic. **Abdom Radiol (NY).** 2023;48(8):2705-2715.
15. Jha DK, Pathiyil MM, Sharma V. Evidence-based approach to diagnosis and management of abdominal tuberculosis. **Indian J Gastroenterol.** 2023;42(1):17-31.
16. Khoiwal K, Yadav K, Devi H, Manisha P, Chaturvedi J. Abdominal tuberculosis mimicking ovarian malignancy. **J Obstet Gynaecol Can.** 2024;46(2):102193. doi:10.1016/j.jogc.2023.102193.
17. Ifthikar MA, Kamath SN, Shetty R, Thippeswamy HG, Biswas S. Unmasking the masquerade: navigating the diagnostic enigma of abdominal tuberculosis mimicking

endometriosis. **J Obstet Gynaecol India.** 2025;75(Suppl 1):582-584.
18. Khurana D, Soni A, Mahajan M. Abdominal tuberculosis masquerading as ovarian tumor: a case series. **Int J Reprod Contracept Obstet Gynecol.** 2025;14.
19. Xiao L, Xia X, Wang T. Extrapulmonary tuberculosis with predominantly hepatic and splenic involvement masquerading as malignancy. **Hepatobiliary Surg Nutr.** 2024;13(6):1084-1086.
20. Samuel EMK, Shanmugam V, Natarajan KV, Ramaswamy S. Abdominal tuberculosis masquerading as malignancy in an infant. **J Indian Assoc Pediatr Surg.** 2025;30(6):780-782.