

Peritoneal Tuberculosis Mimicking Peritoneal Carcinomatosis from Gastric Adenocarcinoma: A Case Report

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ABSTRACT: Peritoneal carcinomatosis is a common and severe complication of advanced gastric cancer, associated with poor prognosis and limited therapeutic options. However, peritoneal tuberculosis can clinically and radiologically mimic carcinomatosis, making diagnosis particularly challenging in endemic regions. We report the case of a 69-year-old female patient with gastric adenocarcinoma and peritoneal lesions highly suggestive of carcinomatosis, which were subsequently confirmed to be peritoneal tuberculosis. This case highlights the importance of considering tuberculosis in the differential diagnosis of peritoneal lesions to avoid misdiagnosis and to ensure appropriate management.

KEYWORDS: Peritoneal tuberculosis, Gastric adenocarcinoma, Peritoneal carcinomatosis, Differential diagnosis, Laparoscopy.

INTRODUCTION

Gastric cancer remains one of the leading causes of cancer-related mortality worldwide. Peritoneal carcinomatosis is a common form of metastatic spread and is associated with a particularly poor prognosis. Peritoneal tuberculosis (PTB), although less common, can mimic carcinomatosis by presenting with ascites, peritoneal nodules, and omental thickening. In endemic regions, distinguishing between these two entities is crucial, as their management differs significantly: systemic chemotherapy for carcinomatosis versus antitubercular therapy for PTB. We report a rare case of gastric adenocarcinoma associated with peritoneal tuberculosis, initially suspected to be peritoneal carcinomatosis.

Clinical Case: Mrs. M.A., a 69-year-old woman, was admitted for evaluation of epigastric pain that had been evolving over the past two years. The pain was associated with postprandial bilious vomiting, anorexia, asthenia, and unquantified weight loss. Her medical history included a laparoscopic cholecystectomy performed two years prior.

Clinical examination revealed tenderness in the epigastric region and the right hypochondrium, without any palpable mass or peripheral lymphadenopathy. Digital rectal examination was normal.

Esophagogastroduodenoscopy revealed an ulcerated and exophytic tumor located in the pyloric antrum, suspicious for malignancy. Biopsies confirmed an invasive villoglandular-type adenocarcinoma.

Abdominopelvic CT scan (**Figures 1A and 1B**) showed thickening of the gastric antrum with infiltration of the perigastric fat and proximal gastric distension, associated with suspicious hepatic lesions and a small amount of peritoneal effusion.

The case was discussed in a multidisciplinary tumor board. It was decided to perform an exploratory laparoscopy with placement of a feeding jejunostomy.

Intraoperative exploration (**Figure 2**) revealed multiple whitish nodules on the peritoneum and hepatic surface, highly suggestive of carcinomatosis. Biopsies were performed, and a feeding jejunostomy was placed.

Histopathological examination revealed epithelioid granulomas with caseating necrosis, confirming a diagnosis of peritoneal tuberculosis. Antitubercular treatment (HRZE regimen) was initiated, and the patient was referred to oncology for management of the gastric cancer.

DISCUSSION

The primary diagnostic challenge lies in the clinical and radiological similarities between peritoneal tuberculosis and peritoneal carcinomatosis. Both conditions can present with abdominal pain, ascites, weight loss, and peritoneal nodules. CT imaging may show irregular peritoneal thickening, an “omental cake” appearance, and nodular lesions—features common to both pathologies. While MRI and PET-CT can help refine the diagnosis, they do not always allow for a definitive distinction.

In our case, the co-occurrence of gastric adenocarcinoma strengthened the suspicion of carcinomatosis. However, the intraoperative discovery of peritoneal nodules necessitates histological confirmation. Laparoscopy is currently considered the gold standard

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diagnostic tool, with a diagnostic yield exceeding 90% when combined with targeted biopsies. Histopathological examination remains fundamental, with the presence of caseating granulomas being pathognomonic for tuberculosis.

The therapeutic implications are significant. Gastric carcinomatosis typically warrants palliative management—systemic chemotherapy and, in highly selected cases, cytoreductive surgery with HIPEC. In contrast, peritoneal tuberculosis responds well to standard antitubercular therapy and generally has an excellent prognosis. The coexistence of tuberculosis and cancer complicates treatment planning and necessitates close multidisciplinary coordination. Potential drug interactions between chemotherapy agents and antitubercular medications must be carefully considered.

Recent studies (Gupta 2022, Liew 2021, Chen 2023) emphasize the importance of including tuberculosis in the differential diagnosis of peritoneal lesions, particularly in endemic regions. The 2023 WHO report also highlights the need for early detection and management of extrapulmonary forms of tuberculosis.

CONCLUSION

Peritoneal tuberculosis should always be considered in the differential diagnosis of peritoneal lesions suspicious for carcinomatosis, particularly in endemic regions. Laparoscopy with biopsy is the key investigation for distinguishing between these two conditions. Early diagnosis helps avoid unnecessary treatments and allows for the initiation of appropriate therapy.

Figures

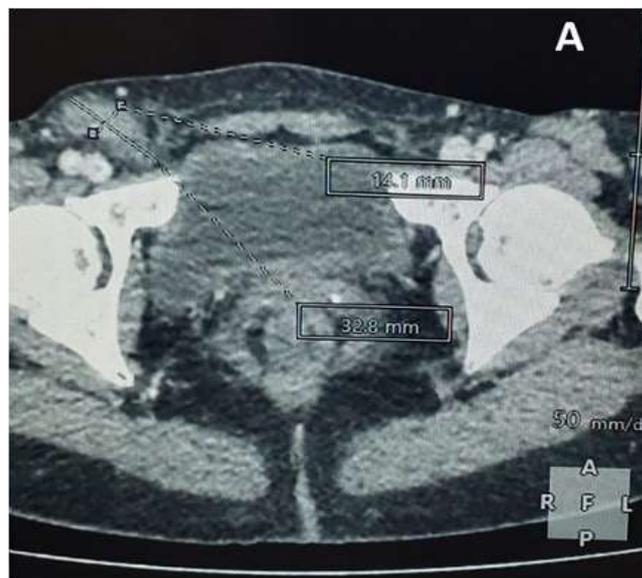


Figure 1A: Abdominal CT scan (axial view): thickening of the gastric antrum with infiltration of the perigastric fat.



Figure 1B: Abdominal CT scan (sagittal view): gastric distension with suspicious peritoneal lesions.



Figure 2: Intraoperative view: whitish peritoneal nodules suggestive of carcinomatosis, later confirmed as tuberculous on histopathological examination.

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