

Unexplained Ascites Leading to the Diagnosis of Primary Fallopian Tube Carcinoma

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Abstract

Presentation

A 58-year-old woman with chronic pancreatitis presented with a two-month history of abdominal swelling, peripheral oedema, exertional dyspnoea, and weight loss.

Diagnosis

Initial assessment considered pancreatitis-related ascites and alcoholic liver disease. Elevated CA-125 (800 U/mL) and malignant cells on cytology prompted further evaluation. CT imaging revealed pulmonary emboli, pleural effusions, ascites, and a right adnexal cystic lesion. Omental biopsy, obtained via image-guided percutaneous technique, confirmed high-grade serous carcinoma, WT1 positive, consistent with Müllerian origin.

Treatment

Management included intravenous antibiotics, diuretics, paracentesis, therapeutic anticoagulation, and pigtail drain insertion. Multidisciplinary review established the diagnosis of Primary Fallopian Tube Carcinoma (PFTC), FIGO Stage IIIC.

Discussion

This case highlights the diagnostic complexity of unexplained ascites, especially in patients with chronic pancreatitis. Elevated CA-125, while suggestive, requires cautious interpretation due to potential benign causes. Comprehensive evaluation including fluid analysis and biopsy was essential to distinguish PFTC from ovarian or peritoneal malignancies. Interdisciplinary collaboration ensured timely diagnosis and management.

Introduction

Primary Fallopian Tube Carcinoma (PFTC) is a rare gynaecological malignancy, accounting for approximately 0.1–1.8% of female genital tract cancers^[1,2]. Preoperative diagnosis is challenging due to nonspecific symptoms and overlapping features with ovarian and peritoneal carcinomas^[2,5]. This report describes a 58-year-old woman with a history of chronic pancreatitis presenting with unexplained ascites, ultimately diagnosed with PFTC after extensive workup. The case underscores the importance of a broad differential diagnosis,

including pancreatic ascites, and the value of tumour markers, imaging, cytology, and biopsy in establishing diagnosis^[1].

Case Report

A 58-year-old woman with a history of alcohol-induced chronic pancreatitis complicated by endocrine dysfunction presented with progressive abdominal distension, bilateral lower limb oedema, exertional dyspnoea, anorexia, and unintentional weight loss over two months. Physical examination revealed tense ascites, generalized abdominal tenderness, and bilateral pitting oedema extending to the mid-thighs.

Laboratory investigations demonstrated chronic iron deficiency anaemia, elevated C-reactive protein (210 mg/L), and markedly raised CA-125 (800 U/mL). Given her history, differential diagnoses included pancreatic ascites secondary to chronic pancreatitis, alcoholic liver disease-related ascites, and malignancy-associated ascites¹.

Ascitic fluid analysis showed exudative characteristics with a serum-ascites albumin gradient (SAAG) of 7 g/L and lactate dehydrogenase (LDH) of 446 U/L. Unfortunately, ascitic fluid amylase was not measured, despite being requested, which could have aided in diagnosing pancreatic ascites. Cell counts revealed no evidence of spontaneous bacterial peritonitis, and cultures were negative.

Chest radiography and computed tomography (CT) scans revealed bilateral pleural effusions, extensive pulmonary emboli, gross ascites, and a right adnexal cystic lesion measuring approximately 3 cm. Therapeutic anticoagulation was initiated. Pelvic ultrasound did not identify a discrete adnexal mass.

Cytological analysis of ascitic fluid revealed malignant cells. An image-guided percutaneous omental biopsy was performed, confirming high-grade serous carcinoma with psammomatous calcifications and WT1 positivity, consistent with Müllerian origin^{2,3}.

Meigs' syndrome was considered due to ascites and pleural effusions but excluded given malignant cytology, consistent with pseudo-Meigs' syndrome.

Multidisciplinary discussion concluded a diagnosis of Primary Fallopian Tube Carcinoma, FIGO Stage IIIC^{2,5}. After ascitic drainage and supportive management, the patient's symptoms improved significantly. She was discharged with oncology referral for further staging and treatment planning, including consideration of cytoreductive surgery and chemotherapy.

Discussion

Ascites of unknown origin requires thorough evaluation, especially when common causes such as cirrhosis, infection, cardiac failure, and renal dysfunction are excluded¹. In patients with chronic pancreatitis, pancreatic ascites is a key differential diagnosis, characterized by

elevated ascitic fluid amylase and low SAAG. This highlights the importance of including ascetic fluid amylase in the diagnostic workup when pancreatic pathology is present. In this case, the ascetic fluid amylase level was not done, despite being requested, and the SAAG were low.

CA-125 is a tumour marker frequently elevated in gynaecological malignancies, including PFTC, but can also be raised in benign conditions such as hepatic cirrhosis, heart failure, and peritonitis, limiting its specificity^{2,5}. Elevated CA-125 in this patient raised suspicion but required correlation with cytology and histopathology for definitive diagnosis.

Imaging findings in PFTC are often nonspecific. The adnexal cystic lesion seen on CT was not definitive for malignancy, and pelvic ultrasound failed to detect a discrete mass. MRI is the preferred modality for characterizing adnexal masses, with typical PFTC features including a tubular or sausage-shaped mass, hydrosalpinx, and intrauterine fluid⁵. The diagnosis of PFTC rather than ovarian or peritoneal carcinoma was based on histopathological criteria, including WT1 positivity and psammomatous calcifications, and the clinical context^{2,3,5}. Image-guided percutaneous biopsy provided tissue diagnosis without the need for invasive laparoscopy.

Preoperative diagnosis of PFTC is rare; most cases are diagnosed postoperatively. Similar cases in the literature emphasize the diagnostic challenge and the utility of ascitic fluid cytology and biopsy in achieving early diagnosis⁶⁻⁸.

The incidental finding of bilateral pulmonary emboli reflects malignancy-associated hypercoagulability, underscoring the need for thromboprophylaxis in oncologic patients⁴.

This case highlights the importance of maintaining a broad differential diagnosis for ascites, especially in female patients with elevated tumour markers and inconclusive imaging. Interdisciplinary collaboration was crucial for accurate diagnosis and timely management.

Unexplained ascites in patients with chronic pancreatitis warrants comprehensive evaluation including ascitic fluid analysis with amylase, tumour markers, imaging, and histopathology. Elevated CA-125 should be interpreted cautiously. This case demonstrates that early diagnosis of rare malignancies such as PFTC is possible through combined cytological and biopsy approaches, facilitating prompt management.

Declarations of Conflicts Interest:

None declared.

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