

# Primary Peritoneal Desmoplastic Mesothelioma

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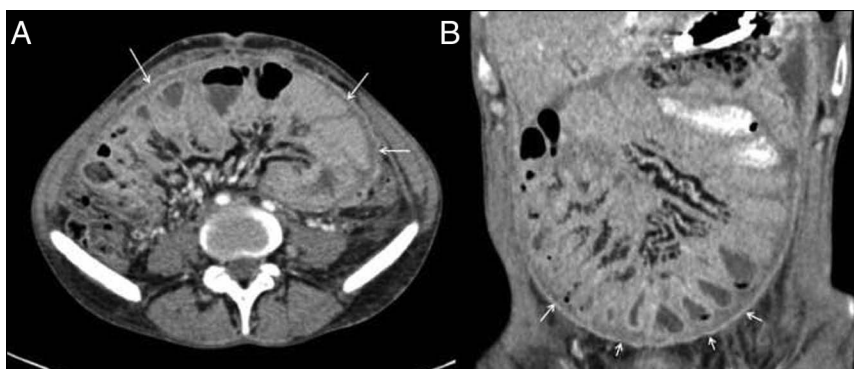
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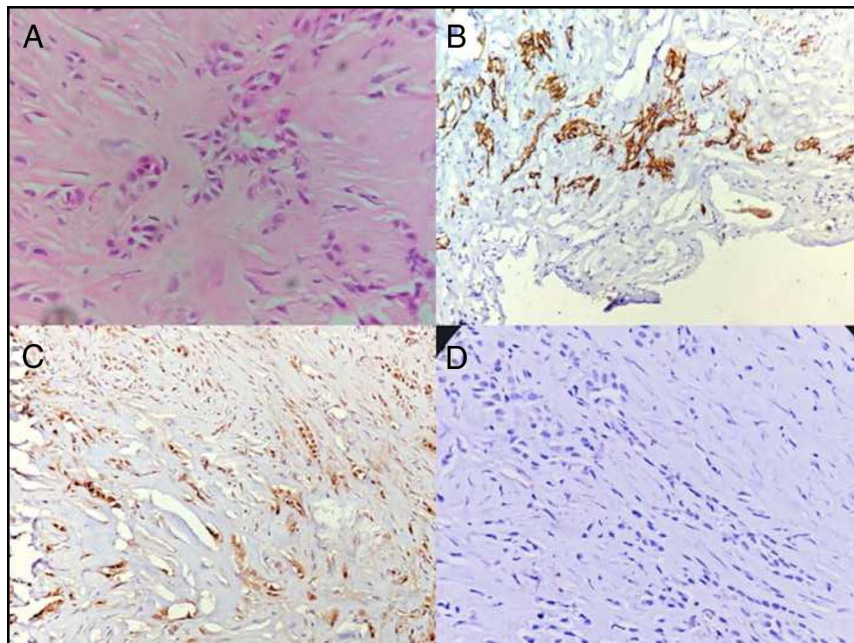
## CASE REPORT

A 40-year-old man presented with complaints of abdominal pain and distension with loss of appetite for the past 9 months. Laboratory investigations revealed mildly elevated amylase and C-reactive protein levels. Abdominal contrast-enhanced computed tomography revealed clumping of the jejunal and ileal loops in the central abdomen enclosed by a thick enhancing membrane with associated mesenteric fat stranding without bowel obstruction (Figure 1). Diagnosis of encapsulating peritoneal sclerosis was made with further workup advised for ascertaining the etiology. A minilaparotomy was performed during which multiple peritoneal and bowel wall serosal biopsies were taken, which showed fragments of dense fibrocollagenous tissue infiltrated by cords of pleomorphic cells showing immunopositivity for cytokeratin, calretinin, P53, and WT1 and negative for desmin, suggestive of peritoneal desmoplastic mesothelioma (Figure 2). The patient was started on pemetrexed and cisplatin-based chemotherapy. After 2 cycles of chemotherapy, the patient died of multiorgan failure approximately 4 months after the presentation.

Desmoplastic variety of the primary peritoneal mesothelioma is a rare entity with few cases reported to date.<sup>1-3</sup> The disease entity was defined by the World Health Organization in 2004. Radiologically, they usually present as nodular or a mass-like peritoneal thickening, mesenteric thickening, omental caking, ascites, and lymphadenopathy. To our knowledge, primary peritoneal desmoplastic mesothelioma presenting as encapsulating peritoneal sclerosis has not been described in the literature. At present, early diagnosis with exploratory laparotomy followed by treatment of this tumor with cytoreductive surgery, systemic chemotherapy, and hyperthermic intraperitoneal chemotherapy is the standard treatment protocol.<sup>4</sup> Differentials of encapsulating peritoneal sclerosis include congenital peritoneal encapsulation, peritoneal carcinomatosis, and internal hernia. This case, therefore, highlights the fact that the desmoplastic variety of primary peritoneal mesothelioma should be included as part of the differentials of encapsulating peritoneal sclerosis, albeit a rare one.



**Figure 1.** (A and B) Abdominal contrast-enhanced computed tomography showing clumping of the jejunal and ileal loops in the central abdomen enclosed by a thick enhancing membrane (white arrows), with associated mesenteric fat stranding without bowel obstruction suggesting a diagnosis of abdominal cocoon.



**Figure 2.** Peritoneal biopsy showing (A) dense fibrocollagenous tissue, with areas of hyalinisation and tumor cells in cords, trabeculae, and sheets (hematoxylin and eosin stain, 400 $\times$ ), and (B and C) immunohistochemistry showing immunopositivity for WT1 and calretinin and (D) negative for desmin suggestive of peritoneal desmoplastic mesothelioma.

## DISCLOSURES

Author contributions: S. Malla and P. Das wrote the manuscript. P. Kumar reviewed the literature. D. Kandasamy edited and revised the manuscript for intellectual content and is the article guarantor.

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Informed consent was obtained for this case report.

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