Clinical Case Report

SOLITARY FIBROUS TUMOUR OF THE MESENTERY

TUMOR FIBROSO SOLITÁRIO DO MESENTÉRIO

Rita MONTEIRO[1], Horacio PEREZ[1]

[1] General Surgery Department, Unidade Local de Saúde de Castelo Branco, Castelo Branco, Portugal

Correspondence: Rita Monteiro (ana.rita.monteiro@hotmail.com)

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ABSTRACT

Introduction: A solitary fibrous tumour is a rare neoplasm which is characterized by the proliferation of fusiform cells with mesenchymal origin. **Case report:** We report a case of a fibrous tumour of the mesentery in a 61-year-old male who was sent to a General Surgery appointment due to left lower abdominal pain and palpation of a mass. Computed tomography demonstrated a well-defined solid mass of 6×5,5 cm located in the left iliac fossae, which was completely resected during surgery. We diagnosed this case as a solitary fibrous tumour of the mesentery, which is unusual. **Discussion:** Since surgery, there has been no evidence of recurrence. A follow-up at 12 months after surgery found no indications of recurrence.

RESUMO

Introdução: Um tumor fibroso solitário é uma neoplasia rara caracterizada pela proliferação de células fusiformes de origem mesenquimal. **Apresentação do caso:** Apresentamos um caso de tumor fibroso do mesentério em um homem de 61 anos que foi encaminhado para uma consulta de Cirurgia Geral devido a dor abdominal no quadrante inferior esquerdo e palpação de uma massa. A tomografia computorizada demonstrou uma massa sólida bem definida de 6×5,5 cm localizada na fossa ilíaca esquerda, que foi completamente ressecada durante a cirurgia. Diagnosticámos este caso como um tumor fibroso solitário do mesentério, o que é incomum. **Discussão:** Desde a cirurgia, não houve evidência de recorrência. Um acompanhamento aos 12 meses após a cirurgia não encontrou indicações de recorrência.

BACKGROUND

A solitary fibrous tumour is a rare neoplasm characterized by the proliferation of fusiform cells with mesenchymal origin. It usually involves the thoracic cavity, affecting structures such as the pleura or the lungs. With less frequency, it involves other visceral and parenchymal organs, including the central nervous system. Although solitary fibrous tumours are well described in the literature,

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those arising from the mesentery are very rare. Here, we report a rare case of solitary fibrous tumour of the mesentery.

CASE REPORT

A man in his 60s with no significant personal medical history was sent by his GP to a General Surgery appointment due to a left lower abdominal pain and palpation of a mass. It was performed a routine blood scan and the results were normal.

Contrast-enhanced computed tomography demonstrated a 60×55 mm expansive formation, in the left iliac fossae, anterior to the iliopsoas muscle, well-circumscribed, predominantly solid, with contrast caption. Figure 1

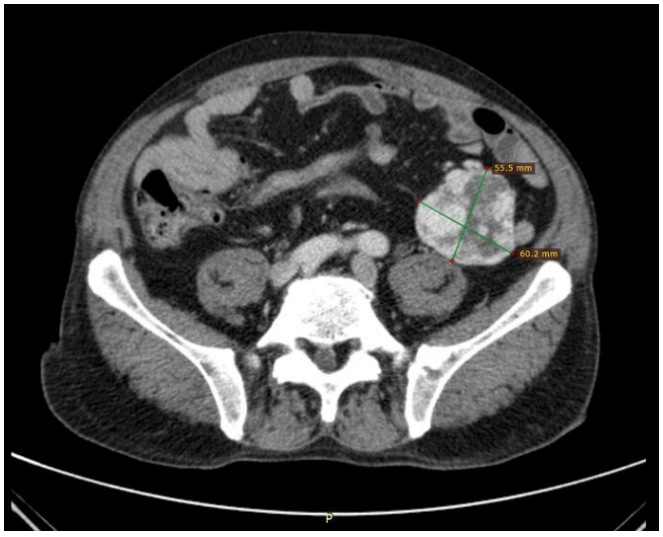

Figure 1 – **CT demonstrates a well-defined mass situated at the mesentery.**

We decided to perform surgery and choose a laparoscopic approach with exteriorization of the lesion for resection. The tumour was observed in the medial portion of the mesentery with some adhesions to the posterior peritoneum. We resected an encapsulated mass from the mesentery, with no relation to the bowel wall, which it a distances around 1 cm. Figure 2 We then perform a combined local resection of 15 cm of the small bowel and ensure complete removal of the tumour.

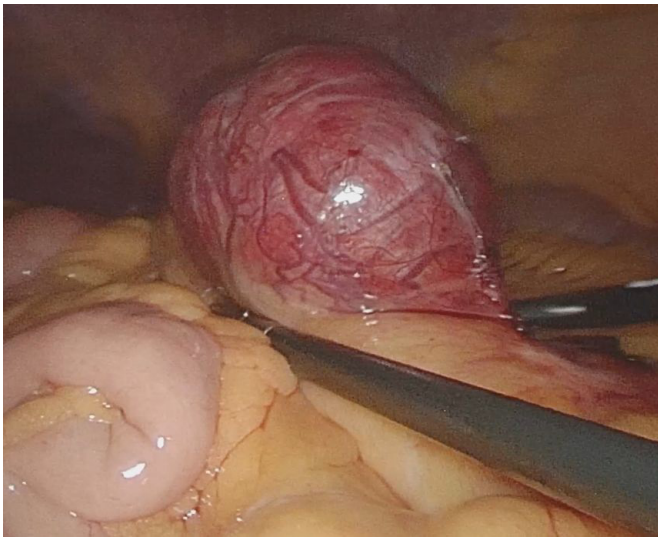

Figure 2 – **Intra operative findings.**

Macroscopic examination of the tumour demonstrated a 6×5×4,5 cm, well-defined, nodular mass with external violet and smooth surface. Figure 3

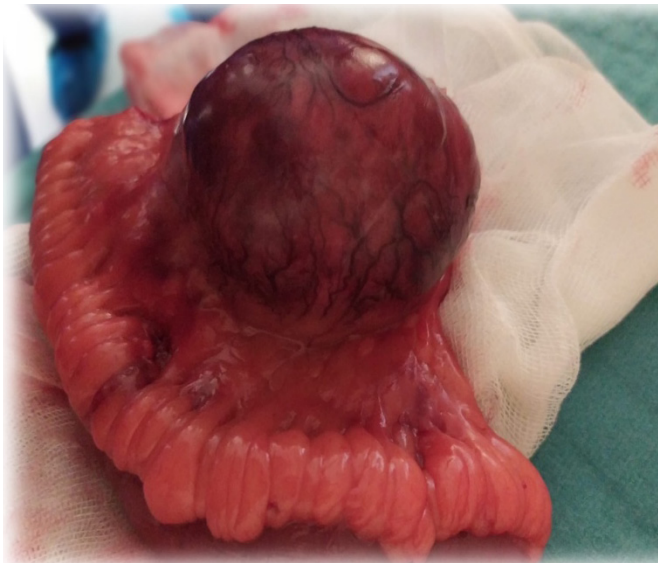

Figure 3 – **Post-operative specimen.**

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Following histological examination, the tumour demonstrated necrosis, hypercellularity, cellular atypia, heterogeneous cell populations (comprising mostly of spindle cells that exhibit patternless growth), and fibrous collagen proliferation.

Immunohistochemically, the tumour showed strong staining for vimentin, alfa-actine, CD34, bcl-2 and vimentin. Other markers, such as pan-keratin AE1/AE3, EMA; caldesmon, calponine, desmin, S-100 protein, CD68 were negative. Based on morphological and immunohistochemical findings the diagnosis was a solitary fibrous tumour of the mesentery with uncertain malignant potential.

Outcome And Follow-Up

Although the natural history of an extrapleural solitary fibrous tumour remains unknown, long-term, and careful follow-up may be necessary, especially in cases with a large tumour and a high mitotic index. We followed this case for 12 months after surgery and found no indications of recurrence.

DISCUSSION

The solitary fibrous tumour of the mesentery is a rare mesenchymal spindle cell neoplasm, first described by Klemperer and Rabin in 1931. Though the aetiology of this lesion remains unclear, it has been recognized that this lesion may occur in extrapleural locations such as the lung, mediastinum, pericardium, mesentery, peritoneum, extraperitoneal spaces, and nose. Nevertheless, a solitary fibrous tumour arising from the mesentery is unusual.[1] Although symptoms of solitary fibrous tumour may be unspecific, they may be related to compression or dislocation of the organs. All cases were treated by surgery, as in our case. The solitary fibrous tumour shows an extensive variety of clinical findings; hence, surgical resection is necessary to reach a final histopathological and immunohistochemical diagnosis.

In general, solitary fibrous tumours comprise various cell types, with an abundance of spindle cells exhibiting patternless growth on histopathological examination. Immunohistochemically, solitary fibrous tumours are commonly positive for CD34, bcl-2, and vimentin, but rarely positive for S100 proteins, desmin, actin, and cytokeratins. In this case, the tumour exhibited characteristics of a solitary fibrous tumour by both histopathological and immunohistochemical analyses.[2,3] Although the majority of solitary fibrous tumour are histopathologically benign, up to 20% may be malignant. Therefore, although complete removal of the tumour may be achieved, recurrence remains a concern. The malignant variant of a solitary fibrous tumour generally comprises a large mass (>50 mm in diameter) and the histologic features of malignant behaviour are marked by hypercellularity, necrosis, cellular atypia, and a high mitotic index (>4 mitoses per 10 HPF). All solitary fibrous tumour has the potential to become malignant, so gross tumour examination and counting of mitoses are recommended to assess the prognosis.[4] In our case, histological analysis did not reveal hypercellularity and invasiveness with nuclear pleomorphism. Based on these findings, we considered our case to have no malignant potential.

Learning Points

Solitary fibrous tumours are rare mesenchymal tumours comprising less than 2% of all soft tissue neoplasms.

CT scans are the cornerstone for diagnosis.

Management involves surgical resection with long-term follow-up.

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