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SMALL BOWEL OBSTRUCTION SECONDARY TO MESOTHELIOMA

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<p>Article Info <i>Received 15/01/2016</i> <i>Revised 27/01/2016</i> <i>Accepted 25/02/2016</i></p> <p>Key words: Malignant mesothelioma (MM), Small bowel obstruction, Asbestos exposure.</p>	<p>ABSTRACT</p> <p>A 64-year-old female, with a history of malignant pleural mesothelioma but no past abdominal operations, presented with small bowel obstruction. She failed non-operative treatment and underwent laparoscopic exploration, which revealed an obstructing mid small bowel tumour. The patient underwent limited small bowel resection, but multiple, non obstructing skip lesions were noted along the mesenteric border. She had uneventful recovery, and was discharged home. Final pathology of the small bowel revealed a malignant mesothelioma of epitheloid subtype.</p>
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INTRODUCTION

A malignancy of the mesothelium is called mesothelioma. Mesothelium is the serosal membrane that covers and protects the internal organs of the body. Malignant mesotheliomas predominantly affect the pleural mesothelium (50–60%) but can affect any anatomical mesothelial surface including the peritoneum (20–30%), the pericardium or indeed the tunica vaginalis testis of the male, or tunica serosa uteri in the female patient. Peritoneal mesothelioma, an unusual disease which diffusely involves the peritoneal surface. The incidence is approximately one per 1,000,000, and one fifth to one third of all mesothelioma is peritoneal in origin. Asbestos exposure has been causally linked to the development of peritoneal mesothelioma as a significant etiology, but further investigation should be conducted [1, 2].

Case Report

A 64-year-old female, with a history of malignant pleural mesothelioma admitted with clinically and radiologically confirmed small bowel obstruction [Figure 1]. She was given a 24 hour trial of non-operative

conservative treatment i.e. “Drip & suck” with a nasogastric tube, intravenous fluids, and urinary catheter.

This patient had a history of asbestos exposure, and was known to have Right sided pleural mesothelioma from 2011. She had undergone chemo-radiotherapy for the pleural mesothelioma, with no obvious disease progression on recent computerized tomography scan of the chest. Other medical co-morbidities involved hypertension, gastro-oesophageal reflux disorder, chronic renal failure, obstructive sleep apnoea.

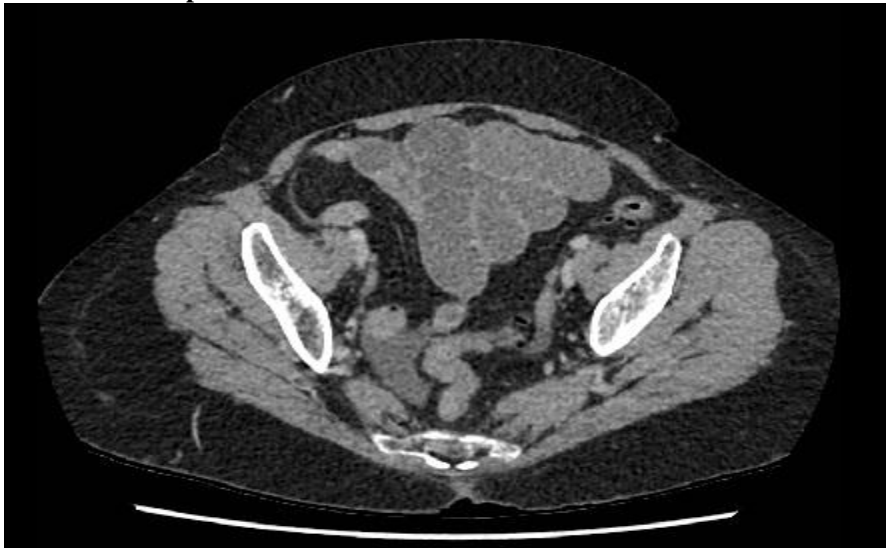
Subsequently, she failed to progress, and developed focal abdominal tenderness with progressive pain, necessitating operative intervention on day 2 of her admission. Diagnostic laparoscopy revealed a transition point in the small bowel at mid jejunum level secondary to an intrinsic small bowel pathology. A limited laparotomy incision was performed to exteriorize the small bowel, and palpate the pathology. Along with the obstructive lesion, multiple non obstructive skip lesions were noticed along the mesenteric border of small bowel as well few mesenteric nodes. Limited small bowel resection with



Primary anastomosis, incorporating the obstructive lesion, as well a couple of skip lesions was performed. The patient had an uneventful recovery, and was discharged home. The histology of the small bowel specimen showed a multifocal malignant tumour within the small bowel segments, consistent with malignant mesothelioma, epithelioid subtype. The Immuno peroxidase staining

showed, Positive: Calretinin, thrombomodulin, cytokeratin 5/6, cytokeratin 7, EMA, WT1 (variable), Ca125 (variable), cytokeratin AE1 / AE3 Negative: Mono clonal CEA, CD15, cytokeratin 20, CDX2, polyclonal CEA, CDX2 PAX8, GATA3, ER, PR, S100 protein. Currently she is having palliative treatment and is under regular oncology follow up.

Figure 1. CT abdomen showing small bowel obstruction with an acute transition Point identified in the distal jejunum, right of the midline in the pelvis.



DISCUSSION

Peritoneal MM is an extremely rare tumour. It was first described in 1908 by Miller and Wynn [3]. Peritoneal mesothelioma has a male predominance, and a median age of 65–69 years old. Although Deraco et al. report a patient diagnosed with a peritoneal mesothelioma aged just 22 years old [4].

Asbestos exposure is the strongest known risk factor for the development of malignant mesothelioma [5]. Options for those patients who are deemed suitable for more aggressive management are also limited. Surgery alone and/or intraperitoneal chemotherapy alone have proven to be similarly ineffective. In recent years, multimodality treatment of peritoneal mesothelioma has largely become the treatment of choice. The management of these patients includes cytoreductive (debulking) surgery involving the removal of all or nearly all visible tumour, combined with either intraperitoneal chemotherapy or radiotherapy [6].

Definitive diagnosis of peritoneal mesothelioma is traditionally a significant problem for the physician and also for the patient. Long delays in definitive diagnosis and therefore delay in definitive treatment may result from this difficulty. Patients with peritoneal MM can present with abdominal distention, fatigue, weight loss, and organ impairment such as bowel obstruction as seen in our patient [7].

CONCLUSION

Small bowel obstruction in patients with the history of pleural mesothelioma could be the first presentation of distant metastasis. Peritoneal mesotheliomas represent distant metastasis, and the treatment is palliative. These patients often present late, and unfortunately as a result treatment is often palliative. Interventions include cytoreductive (debulking) surgery and intraperitoneal chemotherapy or radiotherapy [8]. Peritoneal mesothelioma is a very rare disease entity, yet a diagnosis to be considered in a patient with an abdominal symptoms, previous asbestos exposure, and pleural calcification.

Competing interests

The authors declare no competing interests

Author's Contributions

HM initiated the case series analysed, performed the literature search and interpreted the patient data as well writing the manuscript. NA performed the literature search, and analysed patient data. SS was the consultant surgeon in charge and a major contributor in drafting the manuscript. All authors read and approved the final manuscript.

Consent

A formal consent was obtained from the patient for this publication



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