Peritoneal mesothelioma masquerading as an inguinal hernia

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ABSTRACT

We report a case of an 80-year-old man who presented with a right inguinal hernia that appeared incarcerated. On exploration a sausage shaped mass was found in the sac, which was debulked and histologically shown to be a well differentiated malignant peritoneal mesothelioma. Rare tumours may present as inguinal hernias and palliative debulking may be effective when they present in inguinal hernia sacs.

KEYWORDS

Inguinal hernia cancer – Malignant peritoneal mesothelioma – Inguinal sac mesothelioma

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Malignant mesotheliomas of the peritoneum are exceedingly rare tumours. Very rarely they may present within the sac of an inguinal hernia and surprise the operating surgeon. In such cases palliative debulking may be the only effective treatment.

Case History

An 80-year-old retired steel worker presented with symptoms and signs of an incarcerated right sided inguinal hernia. This had been present for three weeks and he was under investigation for right lower abdominal pain of six months' duration. On examination we found an irreducible, painless lump in the right groin. The abdomen was not distended. The patient was anaemic (Hb 8.6g/dl). Previous computed tomography (CT) suggested a possible inflammatory mass with the omentum extending towards the right inguinal region (Fig 1) with an extensive inflammatory reaction extending around the mesentery surrounding the loops of bowel in the pelvis. He was transfused and the groin explored. A sausage shaped mass coming down the inguinal canal in a sac was found (Fig 2). The tissues were grossly oedematous and it was impossible to identify the cord structures. A right orchidectomy was therefore carried out and the sac opened. The mass was excised at the level of the deep ring and transfixed, thus effectively debulking the tumour.

Histology revealed a well differentiated tubulopapillary-type malignant mesothelioma. It was strongly positive for calretinin and cytokeratin and negative for Ber-EP4, which confirmed the diagnosis. The proximal cut margin of the spermatic cord was infiltrated but the testis and rest of the cord were not involved. The mass may have arisen from the tunica vaginalis. However, the peritoneum was considered

Figure 1 Computed tomography showing inflammation extending towards the right inguinal region with extensive inflammatory reaction around the mesentery

a more likely source given the known CT appearances. The patient's recovery was uneventful and he was offered palliative chemotherapy.

Discussion

Inguinal hernias, especially in elderly patients, may be the presentation of an underlying intra-abdominal pathology.¹

Figure 2 Sausage shaped mass within the inguinal hernia sac

Figure 3 Low power magnification, haematoxylin and eosin stain showing a well differentiated tubulopapillary-type malignant mesothelioma

Occasionally, cord structures and tissues related to the testis may present as a groin lump and its irreducibility may also confer a diagnosis of an incarcerated hernia.

Malignant mesotheliomas are rare tumours of the pleura and peritoneum that are commonly associated with asbestosis exposure and may arise from the peritoneum lining a hernia. The prognosis is very poor and they may be associated with inguinal or umbilical hernias.² Malignant mesotheliomas of the tunica vaginalis are virtually unknown and a recent review reported only five cases.⁵ Indeed, it may be very difficult to pinpoint from where the mesothelioma has arisen, as demonstrated by this case. However, the clinical scenario of our case and previous intra-abdominal imaging suggests a peritoneal origin.

Asbestos exposure is known to be associated with the majority but not all peritoneal mesotheliomas. It was found in four of the five patients known to have mesotheliomas of the tunica vaginalis.⁵ There is some suggestion that chronic irritation and inflammation seen in patients with recurrent peritonitis may be associated with mesothelial hyperplasia and mesothelioma of the sac or peritoneum.⁴ However, a cause and effect relationship is difficult to ascertain.

A management plan for these patients is difficult to formulate due to the rarity of such cases. Sometimes fine needle aspiration can be attempted, which can diagnose well differentiated papillary mesotheliomas in an inguinal hernia sac, but obviously one would need to be certain that the patient does not have bowel in the hernia.⁵ Overall, treatment outcomes are poor. Chemotherapy seems to be the only relatively successful treatment, especially when combined with debulking. Our patient recovered well after the operation and even eight months later he is essentially symptom free.

Conclusions

Surgeons need to be aware that incarcerated inguinal hernias in elderly patients with a history of chronic inflammation may harbour an unusual tumour. Palliative debulking may be quite effective and preferred to aspiration cytology.

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