CASE REPORT

Bilateral saccular inguinal hernias in an elderly woman presenting with advanced ovarian cancer

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SUMMARY

We present a case of an elderly woman presenting with bilateral groin hernias, one reducible and the other irreducible. CT of the abdomen and pelvis demonstrated an irreducible left inguinal hernia containing an incarcerated loop of transverse colon together with saccular metastatic tumour spread. Disseminated omental disease and ascitic fluid were noted throughout the peritoneal cavity secondary to ovarian carcinoma. As a consequence of extensive malignant disease and advanced age, the patient was treated conservatively and subsequently died a number of weeks later. To the best of our knowledge, this is only the second case of bilateral inguinal hernias presenting in a woman with a background of disseminated ovarian malignancy. This case highlights the importance of pre-reduction imaging in atypical complex cases.

BACKGROUND

This case illustrates several interesting points regarding the emergent management of incarcerated inguinal hernias in the elderly population. First, the presence of bilateral inguinal hernias in association with disseminated ovarian malignancy has only been reported on one occasion until now. Second, the presence of transverse colon presenting within an inguinal hernia is also a rare occurrence with 10 previously reported cases and only 3 of these occurring in the presence of malignancy. Third, the importance of preoperative imaging studies in selected patients is demonstrated and particularly in those presenting in atypical fashion. Fourth, this case highlights how the historically controversial practice of taxis is not suitable for all patients. Fifth, although the presence of malignancy in an inguinal hernial sac is an infrequent but well-documented occurrence, the presence of inguinal hernia does not signify an increased risk of intra-abdominal malignancy.

CASE PRESENTATION

An 89-year-old woman nursing home resident was brought by ambulance to the emergency department presenting with a 1-week history of colicky left iliac fossa pain associated with constipation and abdominal distension. Her medical history included congestive cardiac failure, hypertension, atrial fibrillation and Alzheimer's disease. On examination, her abdomen was soft but distended. Bilateral inguinal hernias were noted with the right being reducible and non-tender, while the left was found to be irreducible and moderately tender to palpation.

Figure 1 Plain abdominal X-ray demonstrating non-specific bowel gas pattern with a low lying transverse colon (red arrow). Scoliosis of the lumbar spine concave to the right and a right hemiarthroplasty in situ are also noted.

INVESTIGATIONS

Initial investigations in the emergency department consisted of routine haematological and biochemical studies together with plain imaging of the abdomen and chest. Laboratory values were recorded within the normal range apart from C reactive protein 163 mg/L and serum albumin 23 g/L. The plain abdominal X-ray was reported as showing a non-specific bowel gas pattern (figure 1) and the chest X-ray revealed the presence of a right-sided pleural effusion (figure 2). Given that the patient presented with a tender and irreducible inguinal hernia with a background of abdominal distension, CT of the

Figure 2 Chest X-ray showing a right-sided pleural effusion.

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Figure 3 CT coronal image displaying a non-obstructed segment of transverse colon extending into the left inguinal hernia sac.

abdomen and pelvis was subsequently performed. This investigation demonstrated a viable loop of transverse colon extending into the left inguinal hernial sac (figure 3). In addition to this, irregular areas consistent with saccular metastatic deposits were noted within both hernial sacs (figure 4). Gross omental thickening and ascites were also demonstrated consistent with advanced malignancy. The left ovary was also noted as being pathologically enlarged (figure 5). Subsequent tumour markers performed in light of imaging studies revealed a grossly elevated CA 125 level consistent with ovarian malignancy.

TREATMENT

Given the presence of gross intra-abdominal malignancy and multiple comorbidities, this patient was not deemed suitable for any form of operative intervention. Palliative services were consulted and she was discharged back to the referring nursing home. Additional management was coordinated with the community palliative care team.

OUTCOME AND FOLLOW-UP

The patient passed away peacefully 6 weeks posthospital discharge.

Figure 4 Two CT images displaying sagittal views of the hernia contents of the right and left groin, respectively. Irregular-shaped opacities consistent with metastatic malignant deposits are noted as being present in both hernial sacs.

Figure 5 Image showing bilateral inguinal hernias (red arrows) and the enlarged left ovary (yellow arrow). Significant artefact present from right hip prosthesis.

DISCUSSION

Inguinal hernias are a common surgical presentation in the elderly population with a prevalence of 6%.¹ This case highlights several issues relating to emergency management of inguinal hernias in older patients. Selective preoperative imaging with CT of the abdomen and pelvis is invaluable in defining the anatomy of hernial defects and associated contents in the elderly population and particularly in circumstances where complicating factors such as malignancy or vascular compromise are suspected. The presence of transverse colon presenting acutely within an inguinal hernia is a rare occurrence with only 10 previous cases recorded.² In addition, although there are several reported cases of unilateral inguinal hernia presenting in the presence of underlying ovarian malignancy, there has been only one previously documented case of bilateral inguinal hernias occurring with a background of disseminated ovarian malignancy.^{3–5}

In the absence of preoperative imaging, taxis, which is the manual reduction of hernial contents back into the peritoneal cavity, is potentially contraindicated in the elderly population because of associations with malignancy, ischaemia or

perforation of contents. Until the advent of general anaesthesia in the mid 19th century, taxis was the only method of treating incarcerated or strangulated hernias.⁶ Historically, taxis has generated controversy with several eminent surgeons, most notably Halsted, raising concerns regarding the process of taxis. These concerns relate to reduction en masse of the hernial sac, reduction of a necrotic segment of bowel or delayed ischaemic bowel stenosis.⁷ In a more recent study, taxis was employed in the absence of preoperative imaging to reduce incarcerated or strangulated abdominal wall hernias with a success rate of 60% recorded in a series of 101 adult emergency presentations. Given the higher morbidity and mortality rates associated with emergent hernia repair, the authors advocated that for selected patients, taxis may be of benefit in delaying surgery and in order to optimise comorbid conditions prior to operative intervention.⁸

Malignancy within an excised hernial sac is an infrequent occurrence with a reported incidence of 1 in 200 procedures.⁹ Carcinomas within groin hernias are divided into sacular and intrasacular based on the anatomical relations to the sac.¹⁰ A sacular tumour is present when the primary or metastatic disease directly involves the peritoneal sac such as in our case. Intrasacular tumours occur when the incarcerated hernia contains an organ with a primary carcinoma. This has been most commonly reported in cases of sigmoid colon carcinoma presenting in left inguinal hernias. Numerous cases involving uro-

logical and gynaecological primaries have also been reported. The presence of an inguinal hernia itself does not signify an increased risk of colorectal malignancy.¹¹ Ovarian cancer has been documented on occasions to increase intra-abdominal pressure. This has been shown to present infrequently in the form of groin hernias.¹² Benign ovarian pathology may occasionally result in inguinal hernia formation including the presence of normal ovarian tissue within the inguinal sac.¹³ Thus, consideration regarding an underlying intra-abdominal malignancy should be given in elderly patients who present with new onset groin hernias with a background of abdominal distension, incarceration or weight loss.

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Learning points

- Incarcerated groin hernias require prompt diagnosis and are generally treated by emergent operative intervention.
- Preoperative imaging studies in atypical cases assist the surgeon by defining clearly the anatomy of the hernial defect and the contents of the hernial sac.
- Taxis may be performed in adults but caution is advised in the elderly population, particularly in the absence of preoperative imaging studies.
- The presence of a new groin hernia with a background of abdominal distension, incarceration or weight loss should alert the clinician to the possibility of underlying malignancy in the elderly.

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