CASE REPORT

Femoral hernia, a rare complication following deep inguinal lymph node dissection

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SUMMARY

A 72-year-old woman underwent complete deep inguinal lymph node dissection on her right side subsequent to metastasis from malignant melanoma. On the second postoperative day, the patient reported of nausea and vomiting. She presented with a mass in the resected area that gradually increased in size to approximately 15×20 cm. The wound was opened a few hours after onset of symptoms and a large femoral hernia with 40 cm of small intestine was immediately revealed protruding in the groin. Prophylactic suturing of the inguinal ligament and Coopers ligament can reduce the risk of postoperative femoral hernia. Further, the authors argue that drainage for seroma and haematoma should be performed with utmost care, considering other possible causes and, if necessary, guided by ultrasonography.

BACKGROUND

Inguinal lymph node dissection is associated with a high frequency of complications. With the incidence of these complications reported up to 81%, it is considered a high-risk procedure, often resulting in prolonged hospitalisation.^{1 2} The most frequent reported complications are seroma (12–37%), lymphoedema (13–41%) and infection (12–45%).^{1–4}

We present an unusual case of acute femoral hernia after deep inguinal lymph node dissection, a complication not previously reported, to our knowledge.

CASE PRESENTATION

A 72-year-old woman had suffered from malignant melanoma, which was excised from her right thigh. Histopathology classified this lesion as a superficial spreading malignant melanoma, 1.11 mm thick, Clark level 4, with mitoses and ulceration in the dermal component. Sentinel node biopsy revealed subcapsular and parenchymal metastasis.

Her medical history included several basal cell carcinomas on the face and chest. Her left ovary was removed 39 years ago using a vertical midline incision. There were no previous symptoms of pain or swelling in the groin area, and no history of femoral hernia. She was otherwise fit and well, with a body mass index of 20.4, a non-smoker and working as an active gym-teacher.

The patient underwent complete deep inguinal lymph node dissection on her right side and two closed suction drains were placed within the resected cavity. Peroperatively, the abdominal wall was found intact, with no signs of herniation.

She was mobilised on the first postoperative day. The second postoperative day she reported of pain and swelling in the resected area. Within hours she experienced increasing nausea and vomiting, while the mass increased in size to approximately 15×20 cm. The abdomen and the inguinal swelling were soft on palpation, however, manipulation increased her gastric symptoms. The two suction drains were noted in place, each with some minor serous lymphatic output.

TREATMENT

Owing to symptom progression the patient was operated on a few hours after onset of symptoms. The wound was opened and a large femoral hernia with 40 cm of small intestine was immediately revealed protruding into the groin (figure 1). The bowels showed no signs of ischaemia and were repositioned through the femoral canal between the femoral vein laterally and the lacunar ligament medially (figure 2). The femoral ring was sutured with non-absorbable, interrupted suture, carefully avoiding strangulation of the femoral vein lateral to the repair. The skin was closed as usual, retaining the suction drains in the cavity.

OUTCOME AND FOLLOW-UP

The patient showed immediate regression of gastric and abdominal symptoms. After 5 days, the drains were routinely removed despite a daily output of 120 mL serous lymphatic fluid.

During the following weeks, the patient was evaluated at the outpatient clinic four times for seroma aspiration under ultrasonic guidance. No signs of recurring hernia were detected. The patient

Figure 1 The right groin is displayed, showing the herniation. The intestine appeared perfused with peristalsis.

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Figure 2 After repositioning of the intestines, the femoral ring was displayed. Lateral (left), the femoral vein. Medial, the lacunar ligament. Anterior, the inguinal ligament.

developed lymphoedema of her leg, which was treated with physiotherapy and compression garments. There was no additional metastatic melanoma identified in the dissected lymph nodes.

DISCUSSION

Femoral hernia accounts for approximately 2–4% of all groin hernias.⁵ It is mostly seen in women (70%) and has a high incidence of strangulation if assessment and treatment is delayed.^{5–8}

The standard procedure of deep inguinal lymph node dissection involves dissection and removal of the lymph nodes and adipose tissue medial to the femoral vein.⁹ By dividing the inguinal ligament, the dissection can be extended further proximal involving iliac and obturator nodes as an *Ilioinguinal dissection*. This undoubtedly enhances the risk of postoperative incisional hernia. Zografos *et al*¹⁰ have presented a surgical technique for inguinal repair of Cooper's ligament following ilioinguinal dissection. Even though the deep inguinal lymph node dissection stays superficial to the inguinal ligament, it is possible that a thorough dissection can weaken a predisposed, vulnerable femoral ring, theoretically increasing the risk of femoral hernia. Though a rare complication following deep inguinal lymph node dissection, the risk of femoral hernia could possibly be reduced, if the Cooper's ligament repair was performed as a routine procedure.

Femoral hernia is a differential diagnosis in patients treated with lymph node dissections, and developing abdominal symptoms and swelling in the resected area. When the clinical diagnosis of a groin hernia is uncertain, sonographic findings can be interpreted in conjunction with clinical judgment to assist in diagnosis.^{11 12} Fast diagnosis and evacuation are essential to

prevent intestinal strangulation. It is debatable whether or not the risk of femoral hernia should be included in the preoperative information provided to female patients.

Learning points

- ▶ Postoperative femoral hernia is a differential diagnosis in patients who experience swelling in the groin following inguinal lymph node dissection.
- ▶ When the clinical diagnosis of haematoma or seroma is uncertain, drainage should be performed under ultrasound guidance.
- ▶ Early recognition and evacuation is essential for intestinal survival in cases of femoral hernia.

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Competing interests None.

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