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CASE REPORT/OLGU SUNUMU

Drain or not drain? A surgical dilemma using suction drain for drain site metastasis in a patient with uterine sarcoma

Dren olmalı mı yoksa olmamalı mı ? Uterin sarkomlu bir hastada dren yeri metastazı için aspirasyon dren kullanımıyla ilgili bir cerrahi ikilem

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ABSTRACT

Drain placement is a common practice after major surgeries to prevent collection accumulation in the operation field, follow up against the risk of bleeding or anastomotic leakage, and facilitate wound healing, especially in patients with large amounts of ascites such as ovarian cancer. Although port site recurrences have been described after laparoscopic surgery, metastasis to the previous drain site rarely occurs after laparotomy in gynecologic cancer patients. Cutaneous involvement originating from uterine sarcoma is particularly unusual. Albeit rare, malignant-cell seeding along an artificial percutaneous tract should be kept in mind when deciding to place a drain. We present a case of uterine undifferentiated sarcoma recurrence at the surgical drain site after one year later of primary tumour resection.

Keywords: Sarcoma, Endometrial, Stromal, Neoplasm Seeding

ÖZ

Major cerrahi işlemler sonrasında özellikle yumurtalık kanseri gibi asit fazlalığı olan hastalarda ameliyat alanında sıvı toplanmasını önlemek, kanama veya anastomoz kaçağı riskine karşı takip etmek ve yara iyileşmesini kolaylaştırmak için dren yerleştirilmesi yaygın bir uygulamadır. Laparoskopik cerrahiden sonra giriş yeri nüksleri tanımlanmış olmasına rağmen, jinekolojik kanser hastalarında laparotomiden sonra önceki dren yerine metastaz nadiren görülür. Uterus sarkomundan kaynaklanan cilt tutulumu özellikle sıra dışıdır. Bir dren yerleştirmeye karar verirken, nadir de olsa, yapay bir perkütan yol boyunca tümör ekilebileceği akılda tutulmalıdır. Biz bu olgu sunumda primer tümör rezeksiyonundan bir yıl sonra cerrahi dren bölgesinde uterus andiferansiye sarkom nüksü olan bir olguyu sunuyoruz.

Anahtar Kelimeler: Sarkom, Endometriyal, Stromal, Neoplazm

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INTRODUCTION

Endometrial stromal sarcomas are rare tumours and account for less than 1% of all uterine neoplasms (1). Low-grade endometrial stromal sarcomas are associated with long-term survival, but undifferentiated endometrial sarcomas behave more aggressively, and most patients die within two years (2). Local recurrences and distant metastasis are markedly decreased survival (1). Drain placement is a common practice after major surgeries. In oncologic patients, tumour seeding through this artificial percutaneous tract can occur (3). In this report, we present an unusual case of subcutaneous recurrence at the surgical drain site in a patient with undifferentiated endometrial sarcoma.

CASE

A 48-years old woman has presented with a palpable mass in the lower right anterior abdominal wall. She had a history of total abdominal hysterectomy and bilateral salpingo-oophorectomy for high grade endometrial stromal sarcoma in a different reference hospital fifteen months ago. She received six doses of adjuvant gemcitabine plus docetaxel and remained disease-free until presented with a palpable mass. Physical examination revealed an extensive, tender, swollen, fluctuant area near the previous drain site. The tumour fistulized into the skin within a few days (Figure 1a). Magnetic resonance imaging showed a large mass in the abdominal wall without intraperitoneal extension. Another suspicious implant was at the peritoneal surface around the liver (Figure 1b). She refused the surgical resection, and second-line chemotherapy was started. But then she accepted surgery because the mass progressed despite chemotherapy. Written informed consent was obtained from the patient before the surgery for publication of this case report and accompanying images.

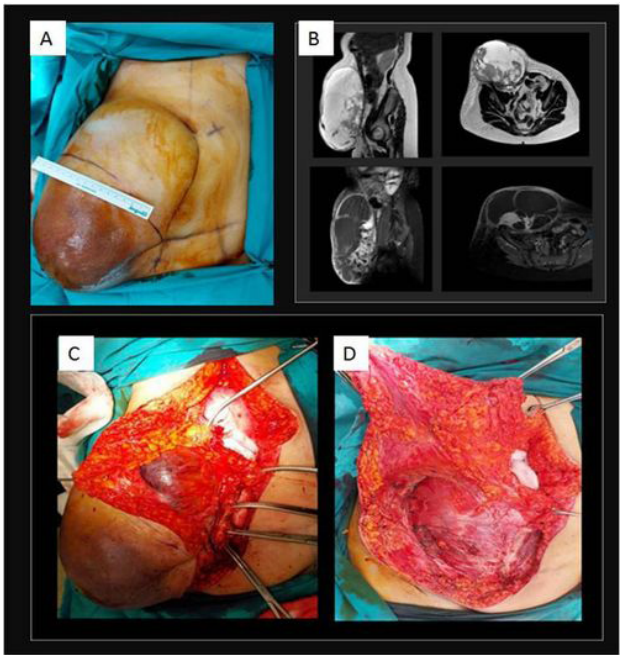

Figure 1. (A) Preoperative photograph of the tumoral mass. (B) Magnetic resonance imaging revealed tumour invasion of the abdominal wall and anterior rectus fascia. (C) In surgery, vertical and groin incisions were made, and the tumoral mass was removed with the anterior rectus fascia and the infiltrated skin tissue. (D) Complete resection of the tumour resulted in a large skin defect and dead space in the surgical area

In surgery, vertical and groin incisions were made, and the mass was removed with the anterior rectus fascia and the skin tissue above (Figures 1c and 1d). The intraperitoneal suspicious implant was also excised. After a suction drain placement in the surgical field, the skin defect was closed by elevating the advancement flap from the right inguinal incision. The drain was removed when the drainage became less than 25 ml/day. Compression garments were applied in the postoperative period, and the patient was discharged on the tenth postoperative day. When the patient came for a control visit, wound healing was satisfactory, and the surgical sutures were removed Pathological examination revealed undifferentiated sarcoma metastasis, but surgical margins were microscopically positive (Figure 2). The patient was started on third-line chemotherapy with trabectedin, but

the disease relapsed three months later, and she died thirteen months after the surgery.

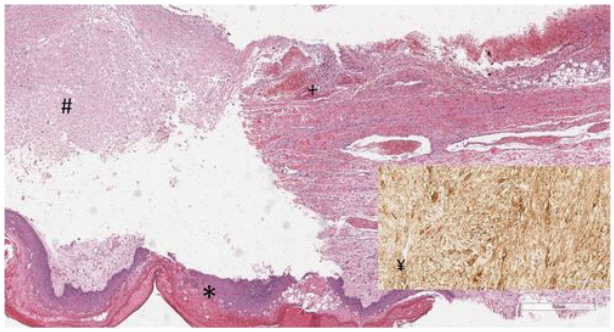

Figure 2. (*) Squamous epithelium overlying the tumour mass, (#)area of necrosis within the tumour, (#)area of necrosis within the tumour, (+): hematoxylin and eosin staining of tumour cells, (¥): CD10 positive immunohistochemical staining in the tumour, immunohistochemical staining for CD10 × 20

DISCUSSION

Drain placement is a common practice after major surgeries to prevent collection accumulation in the operation field, which could lead to infection, follow up against the risk of bleeding and anastomotic leakage (3). It is also used to reduce lymphocyst formation in patients who have undergone retroperitoneal lymph node dissection. Although studies show that routine use of drain is ineffective in preventing short or long-term complications and has a detrimental effect on early mobilization and length of hospital stay, leaving a "guard drain" in the surgical field is a habit that surgeons often prefer and have difficulty abandoning (3-5). In oncologic surgery, albeit rare, cutaneous seeding of tumour cells after the percutaneous placement of suction drains has also been described (6,7).

The possible mechanism of such a situation is not well understood, but it is likely multifactorial. Disease spread can occur through the exfoliation of malignant cells from a primary tumour during surgery due to tumour manipulation.[8] Tumour seeding could also occur along an artificial percutaneous tract by contaminated instruments during drain placement. Surgical wounds may also provide a favourable site for tumour growth due to a resultant milieu rich in growth factors and enhance tumorigenicity of shed tumour cells to the implant (9,10).

Based on the relative infrequency of this condition, there are no well defined, evidence-based preventive measures for drain site metastasis. Head to head comparison to laparoscopic port site recurrence (PSR) cannot be made due to the absence of factors such as the "chimney effect" caused by insufflation, pneumoperitoneum, and aerosolization of exfoliated cancer cells in laparotomy. However, preventive strategies for laparoscopic port site metastasis, including irrigation with tumour static agents, antiadhesion agents, povidone-iodine solution, and taurolidine, have conflictive results, and there is little evidence to support any practice to reduce PSR (9-11). An experimental model in rats suggests that port-site recurrence can be reduced with proper closure of the peritoneum, which creates a physical barrier (10). But peritoneal closure is almost never done after drain removal.

In the presented case, we decided to place a suction drain within the subcutaneous tissue to prevent seroma formation or flap necrosis and promote wound healing. Although using a drain may seem like a contradiction in this patient, closed suction drains have been considered the standard of care for seroma prevention.[11] Delayed wound healing or flap necrosis may have grievous consequences in a patient with such an extensive resection.

In conclusion, drain placement in the surgical area is not a completely harmless procedure, and in many situations, it is unessential and port site recurrence should be kept in mind when deciding to place a drain.

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Conflict of interest

Authors have no conflicts of interest relevant to this article.

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Ethical Decleration

Helsinki Declarationrules were followed to conduct this study.

Authorship Contributions

Concept: SB, MAN, EK, SGA, EA, SS,Design: SB, MAN, EK, SGA, EA, SS, Supervising: SB, MAN, EK, SGA, EA, SS, Financing and equipment: BSB, MAN, EK, SGA, EA, SS, Data collection and entry: SB, MAN, EK, SGA, EA, SS, Analysis and interpretation: SB, MAN, EK, SGA, EA, SS, Literature search: SB, MAN, EK, SGA, EA, SS, Writing: SB, MAN, EK, SGA, EA, SS, Critical review: SB, MAN, EK, SGA, EA, SS

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