

Ovarian Leiomyosarcoma as Incidentaloma during Postbariatric Abdominoplasty Surgical Procedure

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Summary: This case report addresses the discovery, surgical management, histology, and postoperative outcomes of an incidentaloma during the preoperative evaluation of a 58-year-old woman planning to undergo abdominoplasty and hernia correction after bariatric surgery. The patient's computed tomography scan revealed a large pelvic mass in addition to an enlarged uterus and an umbilical hernia. Subsequent surgical intervention included umbilical hernia repair, subtotal omental excision, and en-bloc removal of the uterine and ovarian structures. Histological analysis confirmed the mass as a high-grade utero-ovarian leiomyosarcoma. The patient received adjuvant chemotherapy and demonstrated a positive response in follow-up imaging at 6 months, with reduced mass size and no significant lymphadenopathy. Both aesthetic and morpho-functional outcomes were satisfactory. The report highlights the challenges of diagnosing and treating incidentalomas, emphasizing the need for individualized management. It discusses the rarity of primary ovarian leiomyosarcoma and the surgical approach used. The case ultimately emphasizes the importance of multidisciplinary clinical evaluations in ensuring comprehensive care for patients with unexpected radiological findings, such as utero-ovarian leiomyosarcoma. (*Plast Reconstr Surg Glob Open* 2024; 12:e5536; doi: 10.1097/GOX.0000000000005536; Published online 23 January 2024.)

Incidentalomas are defined as radiological findings reported in symptomatic or asymptomatic patients undergoing imaging for unrelated reasons.¹ In particular, incidental annex masses occur quite frequently, especially in postmenopausal women, where prevalence can lead up to 18%.² Although simple, benign-appearing ovarian cysts are the most common radiological findings, malignancy is considered around 28% (11%–48%).^{1,3}

To distinguish between these groups is crucial, as clinical and surgical management differs greatly. Red flag characteristics include size (≥ 3 cm for postmenopausal and ≥ 1 cm for pre-menopausal women), thickened walls or septa, and solid components with blood flow at the ultrasound; serum levels of cancer antigen 125 can corroborate the diagnosis in postmenopausal patients.⁴ The clinical keystone remains surgery, both

as a diagnostic measure for histological characterization and as a therapeutic standpoint with an appropriate R0 resection.

Primary ovarian leiomyosarcoma is a rare smooth muscle neoplasm accounting for less than 0.1% of all ovarian malignancies.⁵ Surgical approach involves total abdominal hysterectomy with bilateral salpingo-oophorectomy. As lymph node invasion is uncommon, without macroscopic involvement, lymphadenectomy has not been shown to increase overall survival.⁶ Herein, we describe our experience with the management of a 27×18 cm pelvic mass discovered during a computed tomography (CT) scan in preparation of an abdominoplasty surgical procedure, later characterized as utero-ovarian leiomyosarcoma.

CASE REPORT

A 58-year-old woman was referred to our unit with suspicion of a laparocoele and abdominal dermatochalasia to undergo abdominoplasty and hernia correction. In the patient's medical history, an appendectomy, a natural childbirth, and a bariatric surgery procedure (Fig. 1) were documented. The patient had a history of hypercholesterolemia, psoriasis, and hypertension complicating a long-term class III obesity (weight 115 kg and body mass index 52.5 kg/m²). Numerous attempts at weight loss through dietary means had proven unsuccessful; indeed, the

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Fig. 1. Preoperative appearance of the patient; previously, the patient underwent sleeve gastrectomy that led to a decrease in body mass index from 58 to 34.

patient underwent a videolaparoscopic sleeve gastrectomy procedure.

During our preoperative examination, a CT scan of the abdomen revealed a hypodense formation in the mesogastrium (Fig. 2), an enlarged uterus, and a mass in the right iliac fossa. The patient also exhibited a paraumbilical hernia, consistent with her history, palpable at physical examination.

The decision was made to perform umbilical hernia repair surgery, in cooperation with a general surgeon; subtotal omental excision; and en-bloc excision of the uterine and ovarian structures.

The umbilical hernia sac was isolated and removed; moreover, a subtotal omental excision was performed to expose a voluminous mass probably originating from the left ovary, which was capsulated and easily cleaved (Fig. 3). An en-bloc excision of the cystic mass, uterus, and adnexa bilaterally was then performed. After removal of the mass, it was deemed sufficient to perform a suture of the rectus abdominal muscles. An abdominoplasty bisiliac incision and undermining of the adipo-cutaneous flap up to xyphoid-costal arch was initially performed to reduce the surgical impact. Indeed, the patient experienced severe anemia during

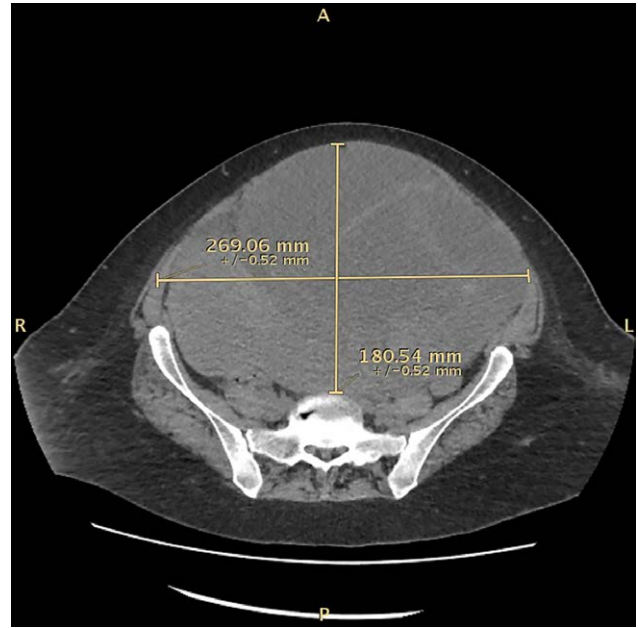


Fig. 2. CT scan showing a 26.9 × 18 cm abdominal and pelvic mass.

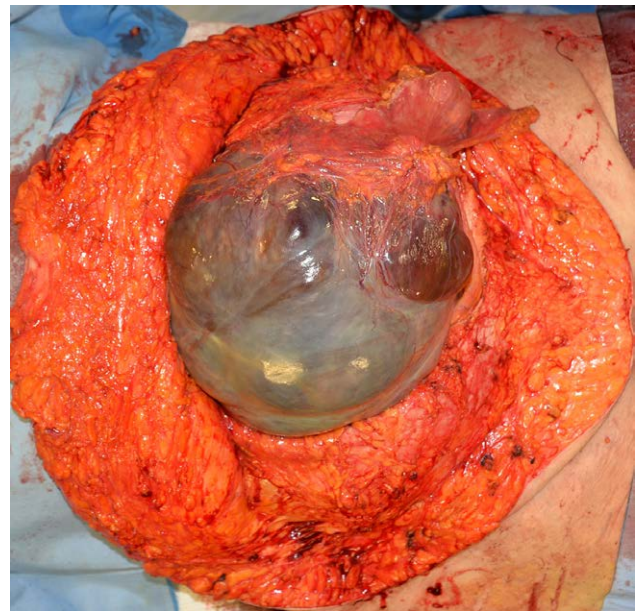


Fig. 3. Intraoperative findings of an ovarian cystic mass after omental incision.

the procedure; therefore, it seemed imperative to minimize the amount of tissue excised.

The excised specimens, including the hernia sac, umbilical scar, and the utero-ovarian mass, were sent for histological examination: the weight accounted for 5.8 kg.

Histological investigation revealed a high-grade utero-ovarian leiomyosarcoma with epithelioid aspects. Atrophic endometriosis lacking atypia and a fibro-glandular body polyp were retrieved. Histology classification staged the tumor as pt2a FIGO IIA [ppt2b (34×29 cm), G3 FNCLCC;



Fig. 4. Postoperative findings at 6 months follow-up showing normal trophism and appearance of the abdominal scar.

AML +, desmin +, caldesmone +, ER+, PgR+, MNF116+ in epithelioid component, AE1/AE3+, CD10+ plurifocal, INI1 preserved.

A postoperative CT scan reported neither suspicious adenopathy nor suspicious nodular lesions. Postoperatively, the patient received adjuvant chemotherapy with gemcitabine and dacarbazine for six cycles. Follow-up imaging at 6 months showed a reduction in the size of the nodular formation, indicating a positive response to chemotherapy. No significant lymphadenopathy was observed, and the inguinal lymph nodes remained unchanged. At the 6-month follow-up, the patient presented normo-trophic abdominal scar, along with good aesthetic and morpho-functional outcomes (Fig. 4).

DISCUSSION

Radiology studies frequently reveal incidentalomas; eight of them (pituitary, thyroid, pulmonary, hepatic, pancreatic, adrenal, renal, and ovarian) have initial care guidelines provided.⁴ When discovered, the best course of action depends on the therapeutic setting and the requests of an informed patient.

Consensus guidelines containing images of low- and high-risk cysts and management suggestions have been issued by the Society of Radiologists in Ultrasound. Even though CT scan would not be the ideal first-stage imaging test to characterize ovarian masses, it is still the examination undergone by most women.³ Some studies depict high accuracy of CT scan in characterization of adnexal malignant masses.⁷ In our case, due to the dimension of the mass, an ultrasound would not have been sufficient; thus, we opted for a CT scan to highlight the known umbilical hernia.

Leiomyosarcoma incidence rises with age and reaches its peak in the seventh decade.⁴ Several exogenous agents have been investigated as potential risk factors, but only Epstein-Barr virus infection, in the context of severe immunosuppression, has been linked to leiomyosarcomas. Like other soft tissue sarcomas, leiomyosarcomas show nonspecific symptoms frequently brought on by displacement of tissues rather than invasion at particular anatomic sites.⁶ Despite a great mass

volume, our patient did not report abdominal symptoms or present anamnestic findings suggesting a higher risk of POMS.

The standard of care for all patients with localized soft tissue sarcomas is surgery. A thorough excision with broad negative margins, with or without adjuvant therapy, has shown the most efficacy.⁸

In this report, total hysterectomy and bilateral salpingo-oophorectomy was performed, followed by sarcoma-oriented chemotherapy due to the stage of the tumor (IIA). We decided not to perform a total lymphadenectomy, as its benefits are yet to be fully determined, and recent studies, although promising, do not have statistical relevance to be applicable in the daily practice.^{9,10} Nevertheless, the result turned out satisfactory with no signs of secondary tumor shown at 6-month follow-up.

CONCLUSIONS

This case highlights the complexity of managing a 58-year-old woman with an abdominal incidentaloma characterized as utero-ovarian leiomyosarcoma. Prompt surgical intervention plus adjuvant chemotherapy resulted in a favorable outcome. Regular clinical evaluation in multidisciplinary settings is crucial to ensure comprehensive care for patients with such rare pathologies.

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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