Reconstruction of a Major Abdominal Wall Defect Using a Tensor Fascia Lata Flap Reinforced with Mesh: Case Report

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BACKGROUND

- Endometrial stromal sarcomas (ESS) are rare uterine mesenchymal tumors
- Surgical resection is the recommended treatment for extra-uterine metastases
- The abdominal wall is the most frequent site for recurrence
- Resection can result in large defects
- Musculocutaneous pedicled flaps, such as the tensor fasciae lata (TFL) muscle, are useful for reconstruction
- The use of mesh to reinforce the repair is a proposed solution for hernia prevention

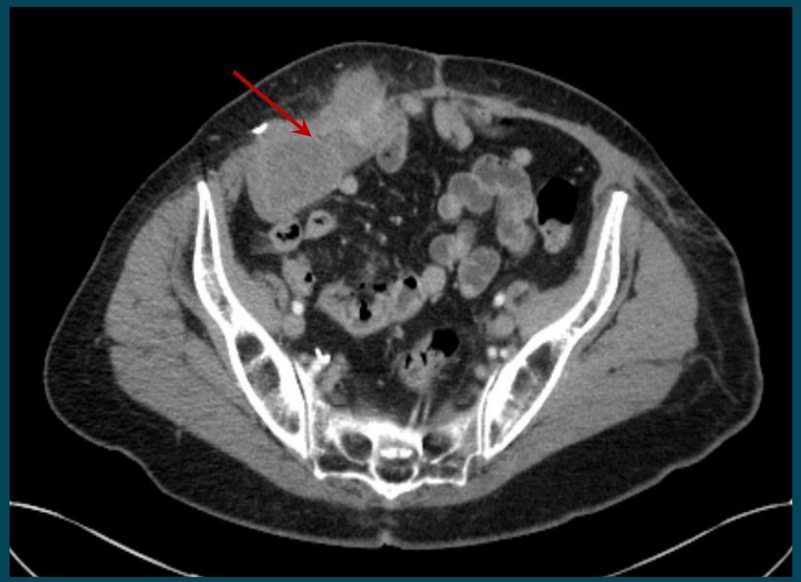
PATIENT HISTORY

2005: Patient diagnosed with ESS S/P parametrectomy, omentectomy followed by external beam radiation

2014 – 2016: Recurrence to lower abdominal wall resected and repaired

2021: Left abdominal wall mass S/P cytoreduction and reconstruction with left TFL flap

2023: Increase in size of right lower rectus muscle mass on CT



OPERATION

- Subcutaneous flap created anterior to mass
- Mass near right pubis during inferior dissection
- Large 17 cm x 16 cm fascial defect after resection
- TFL flap harvested
- Abdominal incision connected to medial aspect of flap to create tract for flap to lay over defect
- Bone anchors placed along pubis with braided polyblend sutures attached to anchor bridging polypropylene mesh along pubic symphysis
- Mesh sutured to fascia circumferentially
- Flap rotated over mesh and noted to be tension-free
- Indocyanine green fluorescence confirmed flap perfusion

POSTOPERATIVE COURSE

- Postoperatively the flap remained well-perfused without evidence of venous congestion
- Patient discharged on post-operative day 5 with excellent wound healing and no evidence of flap loss on subsequent clinic visits



(Left) Large fascial defect with placement of synthetic mesh anchored to pubis below and fascia circumferentially. **(Right)** Final result after rotation of TFL flap and closure of wound

CONCLUSION

- Resection of abdominal wall tumors results in large defects requiring complex reconstruction
- TFL flaps reinforced with synthetic mesh can be a solution especially with prior abdominal wall surgeries

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