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"Scarless" Breast Reconstruction with three free flaps

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Introduction

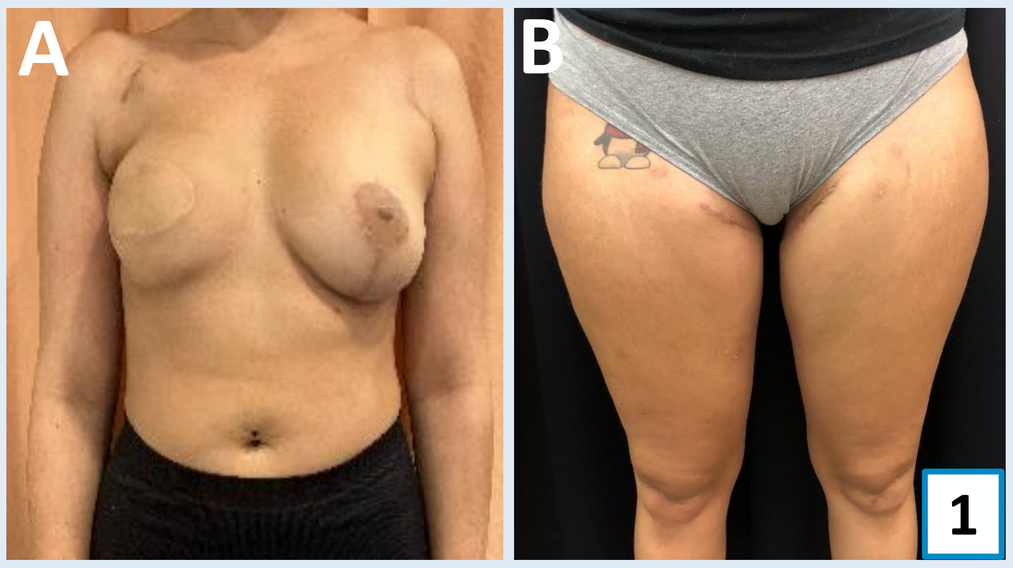
TUG and PAP flaps are well established autologous breast reconstruction options. Laparoscopic harvest of the omental flap is a new potential alternative for breast reconstruction.

We present here the peculiar case of a patient receiving two thigh free flaps for right breast reconstruction and, three years later, a free omental flap for left breast cancer due to contralateral recurrence.

Case Report

Right Breast Reconstruction

A 35-yo woman with invasive breast cancer received immediate reconstruction after SS mastectomy with lymphadenectomy. TUG and PAP flap were used to reconstruct the right breast to match the contralateral side, After touch-up procedures and contralateral mastopexy, the patient achieved satisfactory result despite adjuvant radiotherapy (Fig. 1)

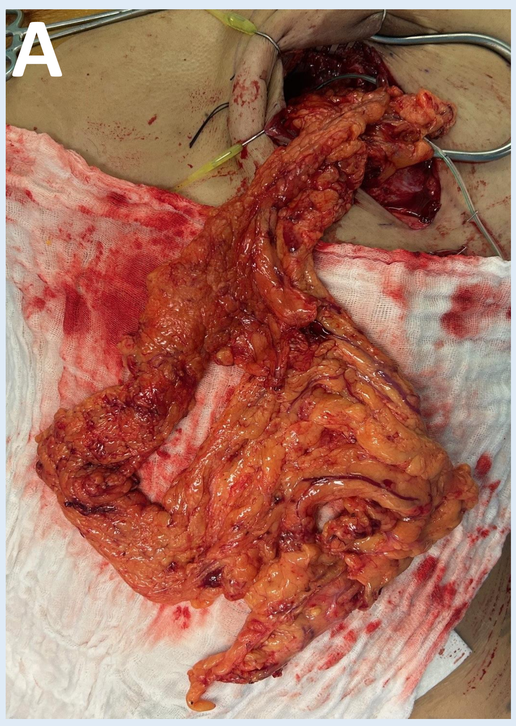


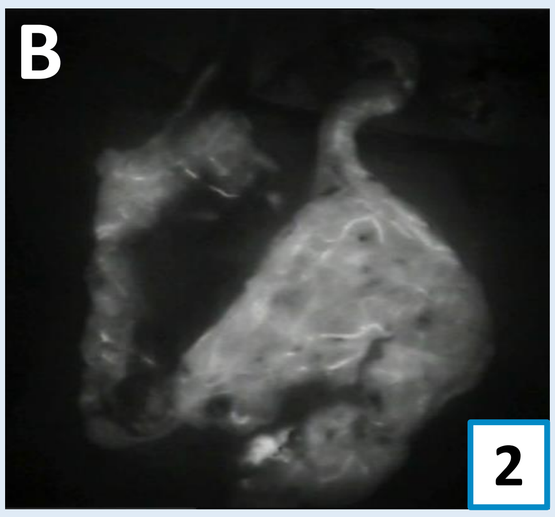
Left Breast Reconstruction

Unfortunately, three years later, the patient developed contralateral cancer, treated with NS mastectomy. Reconstruction was challenging given the limited traditional options and patient`s wish to avoid further scars. Omentum was chosen as ideal choice to meet patient needs.

Flap harvest and microsurgery

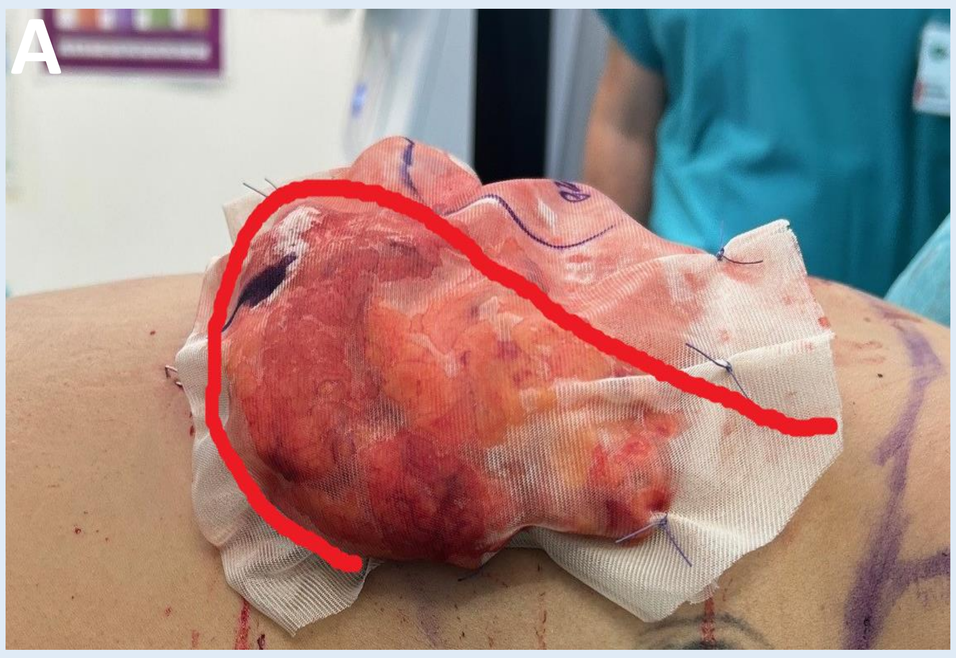
The laparoscopic harvest delivered a flap of 270gr. Microsurgery between IMA/V and GEA/V was performed using a 3-mm coupler, followed by arterial anastomosis with nylon 8/0 sutures. Perioperative Indocyanine Green control confirmed excellent vascularization. (Fig. 2)

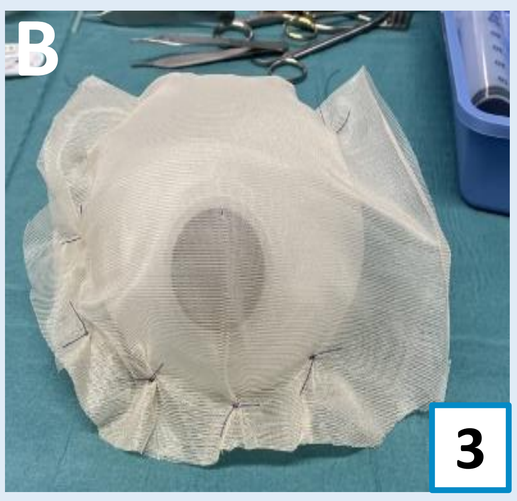




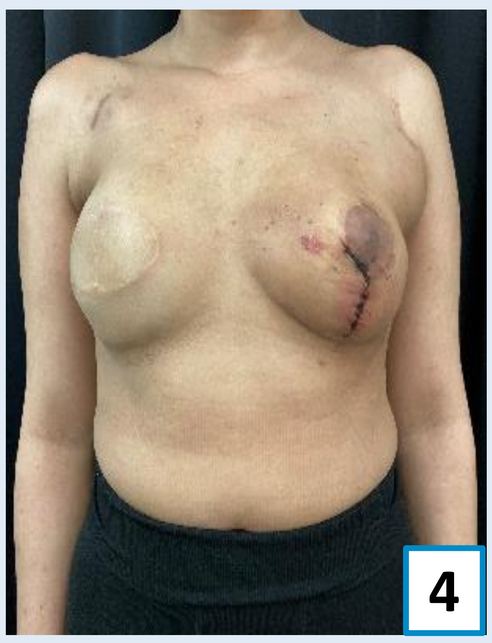
Flap inset

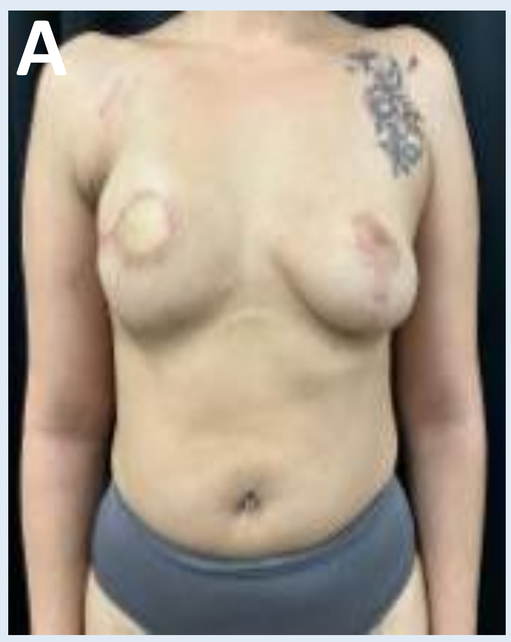
The flap was shaped using a 400cc anatomic expander as temporary mold. A Vicryl mesh was wrapped around the mold, secured with 3.0 Vicryl stitches (Fig. 3). The flap was positioned behind the mastectomy flap, enveloped in the mesh in the desired shape.

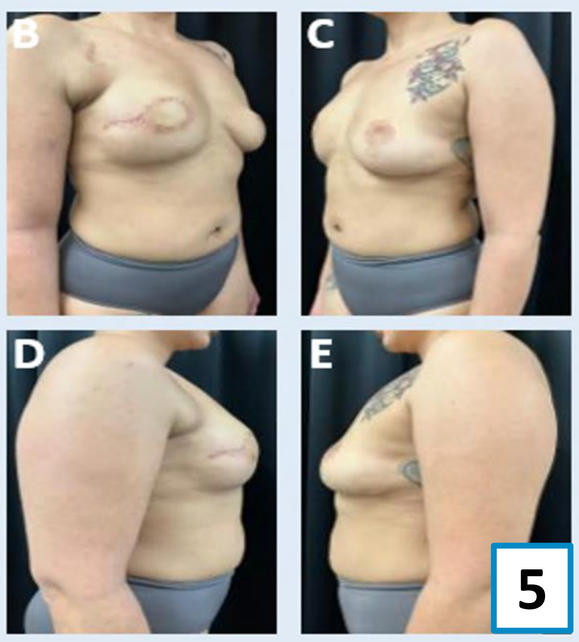




Postoperative recovery was uneventful (Fig. 4). After a supplementary fat graft procedure, final visit one year later confirmed a satisfactory result. (Fig. 5)







Discussion

When needing a scarless autologous solution, the omental flap offers soft appearance, malleability, vascular benefits, resistance to infection and radiation, together with lymphatic absorption, reducing seromas.

A resorbable mesh around helps as structural support. Despite challenges in volume predictability and laparoscopic expertise, patient satisfaction and outcomes were excellent.

Conclusion

Breast reconstruction techniques evolve towards minimal morbidity while aiming for optimal aesthetics. TUG and PAP flap can be indicated for patient with soft tissue excess in the thigh, with hidden scars. The omentum can be a clever option in cases of small to medium cup sizes with almost invisible scarring and can provide a natural reconstruction and an effective vascularized matrix enhancing fat grafting if needed.

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