

Robotic 'Bottom-up' Transabdominal Retromuscular Repair for Diastasis Rectus Abdominis

Lara HOOKWAY-BECARES¹, Jeremy Free¹, Romilly K Hayward^{1,2}, Anna Cantlay^{1,2}, Oliver J Warren^{1,2}

¹Imperial College London, London, United Kingdom; ²Chelsea and Westminster Hospital NHS Fdn Trust

Background

Robotic Transabdominal Retromuscular Repair (TARM) has gained popularity in the management of Diastasis Rectus Abdominis (DRAM), offering advantages over traditional abdominoplasty which involves large scarring incisions and a prolonged recovery.

Method

- **3 robotic ports** positioned along the bikini line
- **Caudocranial retrorectus dissection**
- **Reduction** of concomitant ventral herniae
- Plication of the diastasis using a continuous inverting '**Geneva**' stitch technique
- Closure of the **posterior layer** to enhance the 'waisting effect' of the plication
- Insertion of a **prosthetic mesh**.

Pooled analysis of patients with **postpartum abdominal wall insufficiency** undergoing bottom-up TARM for **combined repair of DRAM and ventral herniae** within a single-surgeon practice.

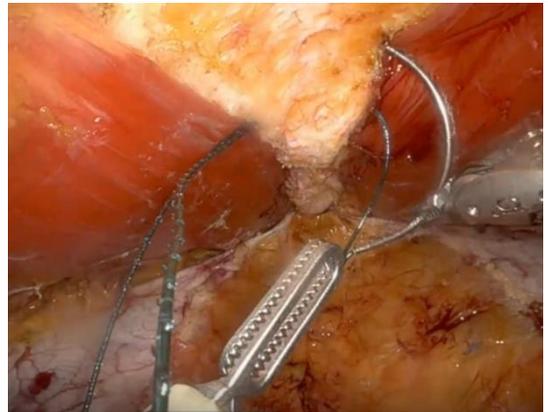


Figure 1: Geneva stitch
 Continuous inverting suture pattern to plicate the diastasis.

Results

September 2024-January 2025: 6 robotic 'bottom-up' TARM procedures.

Median console time: 76 minutes (IQR 68-79)

Demographics:

- Female n=6 (100%)
- Median age **40** (IQR 38-41)
- **ASA I** (66.7%), **ASA II** (33.3%)

Outcomes

- Median blood loss: **30mL** (no transfusions)
- **No** conversions to open
- Median length of stay: **1.5 days**
- **100% complication-free** recovery
- **No** readmissions, no returns to theatre
- **No** deaths within 60 days
- **No** early recurrences.
- Median follow-up: 46 days.

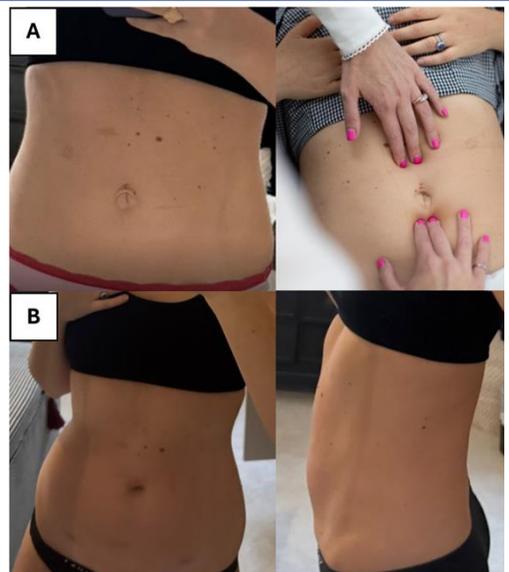


Figure 2: Clinical outcome of robotic TARM for DRAM.
 (A) Preoperative (B) 4-weeks postoperative

Conclusion

Our findings highlight the **successful implementation** of the bottom-up TARM approach into practice, with **favourable postoperative outcomes** and **cosmetic results**, short length of stay, and no readmissions, returns to theatre or early recurrences.

This operation provides an **important alternative** to women suffering with DRAM postpartum, but without significant lipocutaneous issues.