POGP CONFERENCE 2025

Surgical management of diastasis rectus abdominis in the postpartum patient: the robotic option

O. J. Warren & R. K. Hayward
Chelsea and Westminster Hospital NHS Foundation Trust, London, UK

Abstract

Background. Diastasis rectus abdominis (DRA) is very prevalent following pregnancy, affecting up to 89% of women at 6 weeks postpartum and persisting in approximately one-third after 12 months (Sperstad *et al.* 2016). Beyond the cosmetic implications, DRA is associated with pain, abdominal wall weakness, pelvic floor dysfunction and impaired quality of life (Olsson *et al.* 2023; Bracale *et al.* 2025). Despite its frequency, management of this condition remains heterogeneous, with variable thresholds for intervention, and there is a proliferation of conflicting, frequently unverified information disseminated through social media (Giagio *et al.* 2025).

Aim. This study outlines a structured, evidence-based approach to the assessment and management of postpartum DRA. Core components include: definitions, incidence and risk factors; clinical and radiological assessment; non-operative management and current guideline recommendations; and the evolution of minimally invasive and robotic approaches. The discussion draws on the experience of a single surgeon, who introduced robotic transabdominal retromuscular (rTARM) repair as an approach to the management of postpartum abdominal wall insufficiency.

Discussion. Effective management of DRA begins with a structured assessment incorporating functional testing, palpation and targeted imaging, particularly in the presence of concomitant hernias or complex anatomy (Bracale *et al.* 2025). Management requires an integrated multidisciplinary approach that combines conservative rehabilitation, patient education, and when indicated, surgical reconstruction. The TOR [training, operative intervention and rehabilitation] framework (Olsson *et al.* 2023) offers a pragmatic model for comprehensive care. Physiotherapy is fundamental to optimizing core stability and function, and should precede any surgical consideration. However, substantial or symptomatic DRA rarely resolves without an operative intervention, and conservative management is often insufficient to achieve meaningful aesthetic improvement (Mommers *et al.* 2017), underscoring the need for clearly defined surgical thresholds. Surgery is appropriate for patients with persistent symptoms or functional impairment following conservative management, or in the presence of a coexisting ventral or umbilical hernia (Emanuelsson *et al.* 2016; Lappen *et al.* 2016; Strigård *et al.* 2016; Hernández-Granados *et al.* 2021). The repair may be performed using an open or minimally invasive approach, with the choice guided by patient factors, surgeon expertise and available resources (Forester & Sadiq 2023; Medina *et al.* 2024). Robotic techniques enhance visualization, dexterity and ergonomics, and reduce wound morbidity and facilitate a faster recovery (Reddy *et al.* 2023). The novel "bottom-up" rTARM approach enables precise plication and restoration of the abdominal contour through three small, cosmetically concealed incisions along the underwear line (Hookway-Becares *et al.* 2025). Intraoperative transillumination with the robotic light source enhances visualization of the defect, and provides accurate, real-time confirmation of successful plication (Hayward *et al.* 2025). Early

Correspondence: Dr Romilly Hayward, 16 Minden Way, Winchester SO22 4DS, UK (e-mail: romilly.hayward19@imperial.ac.uk).

© 2026 Pelvic, Obstetric and Gynaecological Physiotherapy

institutional experience with 12 patients demonstrated very favourable outcomes, with a median console time of 76 min, a median length of stay of 1.5 days and high patient satisfaction, and no postoperative complications or early recurrences (Hookway-Becares *et al.* 2025). However, in patients with significant pannus or lipocutaneous redundancy, an open operation may be necessary to achieve optimal outcomes. Any surgical intervention should occur within a structured pathway incorporating preoperative physiotherapy, weight optimization and postoperative rehabilitation.

Conclusion. Physiotherapy remains the foundation of DRA management, although its effectiveness is limited in large or hernia-associated separations, and it often fails to deliver the desired aesthetic result. The rTARM mesh repair option offers an anatomically precise, minimally invasive option that achieves excellent outcomes in carefully selected patients, typically those with a body mass index below 30 and minimal lipocutaneous redundancy. When integrated into multidisciplinary pathways incorporating preoperative optimization and structured postoperative rehabilitation, this approach provides a durable restoration of abdominal wall function and a sustained improvement in quality of life. However, as a relatively novel technique, further research, including longitudinal and comparative outcome studies, is needed to substantiate these early results and refine patient selection.

Keywords: diastasis rectus abdominis, postpartum, robotic transabdominal retromuscular mesh repair, surgical management .

Citation: Warren O. J. & Hayward R. K. (2025) Surgical management of diastasis rectus abdominis in the postpartum patient: the robotic option. *Journal of Pelvic, Obstetric and Gynaecological Physiotherapy* **138** (Spring), 90–92.

DOI: 10.62399/QVAA2911.

References

Bracale U., Stabilini C., Cavallaro G., *et al.* (2025) The Italian national consensus conference on the diagnosis and treatment of rectus abdominis diastasis in postgravidic women. *Hernia* **29** (1): 213. DOI: 10.1007/s10029-025-03403-x.

Emanuelsson P., Gunnarsson U., Dahlstrand U., Strigård K. & Stark B. (2016) Operative correction of abdominal rectus diastasis (ARD) reduces pain and improves abdominal wall muscle strength: a randomized, prospective trial comparing retromuscular mesh repair to double-row, self-retaining sutures. *Surgery* **160** (5), 1367–1375. DOI: 10.1016/j.surg.2016.05.035.

Forester E. & Sadiq A. (2023) Comparative analysis of the efficacy and functionality of abdominoplasty versus minimally invasive techniques in the surgical treatment of diastasis rectus abdominis in postpartum women. *Surgical Endoscopy* **37** (12), 9052–9061. DOI: 10.1007/s00464-023-10540-w.

Giagio S., Rial-Rebullido T., Salvioli S., *et al.* (2025) #diastasisrecti: a mixed-methods analysis of Instagram posts and their influence on women's exercise and sports participation. *BMC Women's Health* **25** (1): 332. DOI: 10.1186/s12905-025-03885-y.

Hayward R. K., Brunner M. & Warren O. J. (2025) *Using Transillumination with Light to Demonstrate Eradication of Diastasis Rectus Abdominis During Robotic Surgery.* [WWW document.] URL https://www.ehs2025.org/images/e-posters/OTHERS/00341%20-%20Using%20Transillumination%20with%20Light%20to%20Demonstrate%20Eradication%20of%20Diastasis%20Rectus%20Abdominis%20during%20Robotic%20Surgery.pdf

Hernández-Granados P., Henriksen N. A., Berrevoet F., *et al.* (2021) European Hernia Society guidelines on management of rectus diastasis. *The British Journal of Surgery* **108** (10), 1189–1191. DOI: 10.1093/bjs/znab128.

Hookway-Becares L., Free J., Hayward R. K., Cantlay A. & Warren O. J. (2025) *Robotic "Bottom-up" Transabdominal Retromuscular Repair for Diastasis Rectus Abdominis.* [WWW document.] URL https://www.ehs2025.org/images/e-posters/OTHERS/00465%20-%20Robotic%20%E2%80%98Bottom-up%E2%80%99%20Transabdominal%20Retromuscular%20Repair%20for%20Diastasis%20Rectus%20Abdominis.pdf

Lappen J. R., Sheyn D. & Hackney D. N. (2016) Does pregnancy increase the risk of abdominal hernia recurrence after prepregnancy surgical repair? *American Journal of Obstetrics and Gynecology* **215** (3), 390.e1–390.e5. DOI: 10.1016/j.ajog.2016.05.003.

Medina J. P., Tambasco D., Albanese R., *et al.* (2024) Abdominoplasty versus endoscopic approach to diastasis recti repair: a comparative study of outcomes. *JPRAS Open* **41**, 411–419. DOI: 10.1016/j.jpra.2024.06.011.

Mommers E. H. H., Ponten J. E. H., Al Omar A. K., *et al.* (2017) The general surgeon's perspective of rectus diastasis. A systematic review of treatment options. *Surgical Endoscopy* **31** (12), 4934–4049. DOI: 10.1007/s00464-017-5607-9.

Olsson A., Woxnerud K., Kiwanuka O., Sandblom G. & Stackelberg O. (2023) The TOR concept (training, operation, and rehabilitation) applied to a cohort of postpartum

© 2026 Pelvic, Obstetric and Gynaecological Physiotherapy

women with training-resistant symptomatic rectus diastasis: evaluation 1 year after surgery. *BJS Open* **7** (1): zrac162. DOI: 10.1093/bjsopen/zrac162.

Reddy K., Gharde P., Tayade H., *et al.* (2023) Advancements in robotic surgery: a comprehensive overview of current utilizations and upcoming frontiers. *Cureus* **15** (12): e50415. DOI: 10.7759/cureus.50415.

Sperstad J. B., Tennfjord M. K., Hilde G., Ellström-Engh M. & Bø K. (2016) Diastasis recti abdominis during pregnancy and 12 months after childbirth: prevalence, risk factors and report of lumbopelvic pain. *British Journal of Sports Medicine* **50** (17), 1092–1096. DOI: 10.1136/bjsports-2016-096065.

Strigård K., Clay L., Stark B. & Gunnarsson U. (2016) Predictive factors in the outcome of surgical repair of abdominal rectus diastasis. *Plastic and Reconstructive Surgery – Global Open* **4** (5): e702. DOI: 10.1097/GOX.0000000000000688.

Mr Oliver Warren is the clinical director of surgery at Chelsea and Westminster Hospital NHS Foundation Trust, and a consultant colorectal and hernia surgeon at Chelsea and Westminster, One Welbeck Digestive Health and the Lister Hospital, London. He leads a high-volume colorectal and abdominal wall practice, and is a recognized expert in minimally invasive and robotic surgery. Oliver has extensive experience in colorectal cancer and complex abdominal wall reconstruction. Prior to his appointment as a consultant surgeon, he undertook colorectal surgery fellowships at St Mark's Hospital, London, and the Royal Prince Alfred Hospital, Sydney, Australia. In 2012, he was awarded the Association of Surgeons of Great Britain and Ireland Gold Medal for outstanding performance in the Fellowship of the Royal College of Surgeons examination, and in 2013, was the Association of Coloproctology's Visiting Fellow at Cleveland Clinic, Cleveland, OH, USA. Oliver is an honorary clinical senior lecturer in the Department of Surgery and Cancer at Imperial College London, and has authored numerous scientific papers and book chapters on colorectal and hernia surgery, medical leadership, patient safety, and surgical education.

Dr Romilly Hayward is a foundation doctor at Royal Hampshire County Hospital, Winchester, UK. She graduated from Imperial College London in 2025 with an MBBS and BSc (First-Class Honours), ranked in the top four of her cohort, and was awarded the University of London Gold Medal Proxime Accessit and Faculty of Medicine Prize for outstanding performance in MBBS. Romilly has authored numerous research papers, and delivered prize-winning presentations at national and international conferences. In 2024, she led the restructuring of the Complex Abdominal Wall Reconstruction Multidisciplinary Team at Chelsea and Westminster Hospital, which she continues to coordinate. Her academic and clinical interests include colorectal surgery, abdominal wall reconstruction and minimally invasive surgery.

© 2026 Pelvic, Obstetric and Gynaecological Physiotherapy