

Minimal Incision Repair of Rectus Abdominis Muscle Diastasis (MIRRAD) as Day-Case Surgery: A Prospective Study

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Aim: Postpartum rectus abdominis diastasis (PP-RAD) is a condition that may cause abdominal wall insufficiency, affecting daily life. When conservative treatments are unsuccessful, surgical intervention may be necessary.

Methods: This study included 33 female patients aged 20-50 years with PP-RAD and an inter-rectus distance (IRD) of ≥ 3 cm. All patients had previously undergone conservative treatment without satisfactory outcomes. Each patient received the MIRRAD procedure as day-case surgery apart from one who stayed overnight due to nausea. Follow-up evaluations were conducted at 4 hours, 1 week, 1 month, and 1 year after surgery.

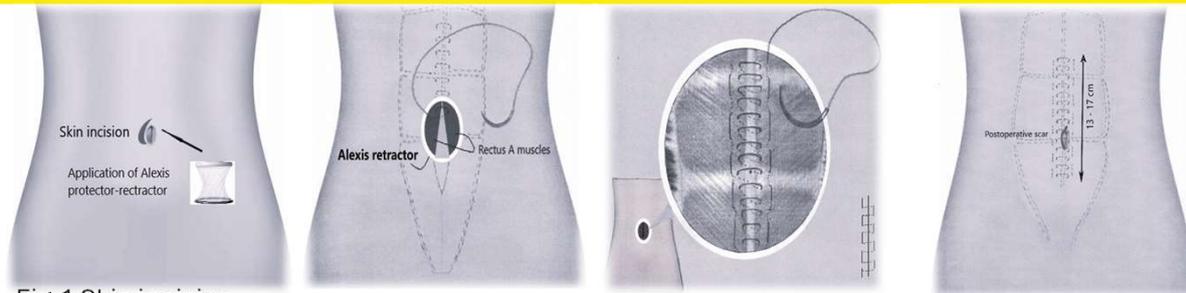


Fig.1 Skin incision

Fig.2 Plication of diastasis

Fig.3 Reinforcement suture

Fig.4 Final result

Results: The average inter-rectus distance (IRD) was 4.4 cm, with a mean diastasis length of 15 cm. Of the 33 patients included, 2 did not attend the 1-year follow-up leaving 31 for final analysis. Of these, 30 had one or more concomitant hernias. The mean operation time was 67 minutes. At the one-year follow-up, 87% of patients were satisfied with the results, and 90% said they would undergo the procedure again if necessary. No surgical site infection was reported, and recovery was generally smooth. Thirty of the 31 patients were discharged within 4 to 6 hours after surgery, while one patient stayed overnight.

Table 1. Baseline data

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---|----|---------|---------|------|----------------|
| Hernia size cm | 30 | 0.4 | 1.2 | 0.7 | 0.21 |
| Suture-line length in cm | 31 | 12.0 | 20.0 | 15.1 | 2.0 |
| Peroperative max. Inter-rectus distance in cm | 31 | 3.0 | 8.0 | 4.4 | 0.9964 |
| Peroperative length of diastasis in cm | 31 | 12 | 20 | 15.9 | 2.6 |
| Operation time in minutes (skin to skin) | 31 | 35 | 120 | 67.3 | 19.7 |
| Valid N | 31 | | | | |

Conclusion: MIRRAD appears to be a safe and effective surgical option for PP-RAD, particularly in cases without significant excess skin. Further studies with larger populations and longer follow-up are needed to confirm these findings and establish standard patient selection criteria.