

Comparative Outcomes of Rectus Diastasis Repair with and without Mesh: A Randomized Clinical Trial

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OBJECTIVE

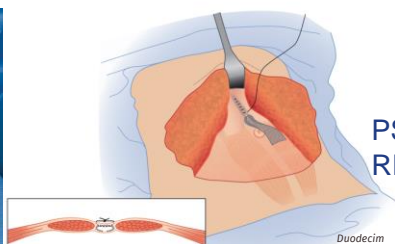
Rectus diastasis (RD) can cause functional impairment and pain. Surgical approaches vary regarding mesh use for linea alba restoration. This randomized controlled trial compared Plication Supported by Mesh (PSUM) with plain suture plication without mesh.



METHODS

Eighty-four normal-weight women (ages 25–52) with symptomatic postpartum RD were randomized to PSUM (n = 44) or suture plication (n = 40). Outcomes were assessed at a median follow-up of 15.1 months postoperatively. Primary outcomes were inter-rectus distance (IRD) reduction (measured via ultrasound) and RD recurrence (IRD > 20 mm). Secondary outcomes included health-related quality of life (HRQoL, RAND-36), low back disability (Oswestry Disability Index, ODI), motor control, and complications. Patients, physiotherapists, video analysts, and data collectors were blinded to group allocation.

PLICATION
 ONLY



PSUM MESH
 REPAIR



RESULTS

Although IRD reduction was greater in PSUM (52 mm, 95% CI: 48–56 mm) than in the suture group (44 mm, 95% CI: 40–47 mm, $p < 0.05$) the superiority trial yielded a negative primary outcome as RD recurrence occurred in two patients per group. HRQoL and ODI improved significantly in both groups, with no postoperative differences. ODI scores improved from 15.6% preoperatively to 4.0% postoperatively ($p < 0.05$). Motor control improved significantly, but preoperative exercises had no impact on ODI or HRQoL. Complications were mostly minor and comparable (PSUM: 38.6%; suture: 32.5%), with severe complications being rare (PSUM: 6.8%; suture: 5.0%).



CONCLUSION

Both PSUM and suture plication yield stable, satisfactory outcomes. PSUM enhances IRD reduction and assists linea alba plication stability. Surgery significantly improves motor control, low back function, and HRQoL in symptomatic RD patients.