

Suture versus biosynthetic glue mesh fixation in open retromuscular ventral hernia repair: A randomized clinical trial

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Aim

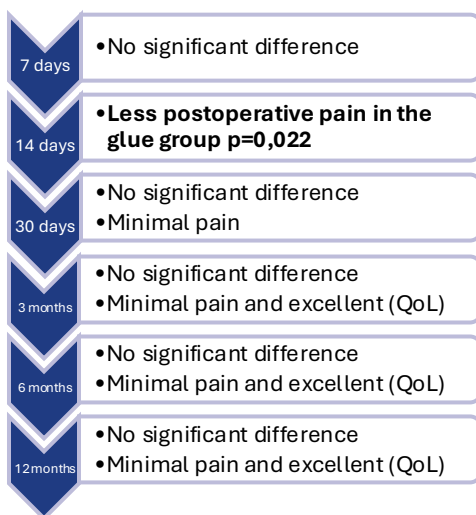
Given that the use of mesh in hernia repair has significantly decreased recurrence rates, the research nowadays has focused on patients' postoperative quality of life (QoL), which could be affected, among other agents, by the applied mesh fixation technique*. The purpose of this study was to investigate the potential advantages of the use of biosynthetic glue (LiquiBand FIX8® Open), compared to sutures, for mesh fixation in open retromuscular hernia mesh repair, because of its atraumatic nature.

Material & Methods

- Randomized, prospective, single-blind study (ISRCTN registry number 95370808)
- 48 patients with open retromuscular hernia repair (Rives-Stoppa or TAR)
- Suture group (N=24): mesh fixation with slowly absorbable suture (polydioxanone)
- Glue group (N=24): mesh fixation with biosynthetic glue (N-Butyl 2 cyanoacrylate, LiquiBand FIX8® Open)
- Primary endpoints: postoperative pain in 7, 14, 30 days and 3, 6 and 12 months, QoL in 3, 6 and 12 months^{**},^{***}
- Secondary endpoints: duration of operation, need for blood transfusion, length of hospital stay, postoperative complications, need for reoperation and recurrence

Results

Follow-up



Minor complications in 6/48 patients (glue group:2, suture group:4), treated successfully conservatively

Postoperative complications



No recurrence, reoperation or major complication in the 12-month follow-up

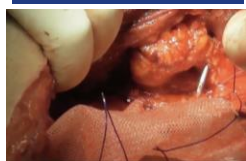
Conclusion

- This study showed that both techniques of mesh fixation in open retromuscular hernia repair are safe with minimal complications and excellent results concerning the postoperative pain and quality of life
- Mesh fixation using biosynthetic glue (n-butyl-2-cyanoacrylate, LiquiBand FIX8® Open) is associated with less pain in the early postoperative period

Patients with midline ventral hernias undergoing rectorectus/retromuscular repair (48)

Glue fixation (24)

Sutures Fixation (24)



*Rhemtulla et al, Plast Reconstr Surg - Glob Open. 2019;7(4):1-6

**Muyoms, et al, Surg. 2016;160(5):1344-57

***Krpata et al, J Am Coll Surg. 2012;215(5):635-42