Review

Is Shouldice the best NON-MESH inguinal hernia repair technique? A systematic review and network metanalysis of randomized controlled trials comparing Shouldice and Desarda

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Highlights

- Analysis of results of the new tissue repair technique for groin hernia surgery: the Desarda technique.

- Comparison by network (indirect) meta-analysis of tissue repair techniques Desarda and Shouldice.

- Evidence of the effectiveness of tissue repair techniques for groin hernia surgery.

Abstract
Background

Current guidelines state that the Shouldice technique has lower recurrence rates than other suture repairs and therefore is strongly recommended in non-mesh inguinal hernia repair. Recently a new tissue repair technique has been proposed by Desarda and studied in trials against Lichtenstein technique.

Methods

The present study was performed according to the PRISMA Statement for Network Meta-analysis and the AMSTAR 2 checklist. The method of network meta-analysis was chosen to evaluate randomized controlled trial published on tissue repair and comparing Lichtenstein respectively with Desarda and Shouldice techniques. The following parameters: operative time, recurrence, complications (general, intraoperative, Surgical Surgical Site Occurrences), VAS score on postoperative day 1, numbness, chronic pain and return to daily activities.

Results

Fourteen RCTs, involving 2791 patients, fulfilled the inclusion criteria and were selected for final analysis. The anchored indirect treatment comparison showed that Desarda's technique requires a significantly shorter operative time (MD: −12.9 min; 95% CI: −20.6 to −5.2) and has a quicker recovery (MD: −6.6 days; 95% CI: −11.7 to −1.4). Outcomes concerning intraoperative complications, early postoperative pain, seroma/hematoma, hydrocele and infection rates, recurrence, numbness and chronic pain were similar among the two techniques.

Conclusions

Desarda's hernia repair can be a valuable alternative to Shouldice technique for the treatment of primary inguinal hernia repair if a non-mesh technique is chosen, because of its reproducibility and quicker postoperative recovery. We recommend performing well designed prospective studies comparing both techniques directly.

Keywords

Inguinal hernia; Groin Hernia; Lichtenstein; Desarda; Shouldice