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CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

Absorbable Strap Hernia Fixation Devices Versus Absorbable Tack Hernia Fixation Devices: Comparative Clinical Effectiveness

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About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada's health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.

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Questions or requests for information about this report can be directed to **requests@cadth.ca**

Research Question

1. What is the comparative clinical effectiveness of absorbable strap fixation devices with a 5mm non-spiral shaft versus absorbable tack fixation devices with a 5mm spiral shaft for patients requiring a hernia repair?

Key Findings

No relevant literature was identified regarding the comparative clinical effectiveness of absorbable strap fixation devices with a 5mm non-spiral shaft versus absorbable tack fixation devices with a 5mm spiral shaft for patients requiring a hernia repair.

Methods

Literature Search Methods

A limited literature search was conducted by an information specialist on key resources including MEDLINE, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. The main search concepts were absorbable tack fixation devices, including STRAP25 and SECURESTRAP, and patients with a hernia. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and September 6, 2020. Internet links were provided, where available.

Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in Table 1. Full texts of study publications were not reviewed. The Overall Summary of Findings was based on information available in the abstracts of selected publications.

Table 1: Selection Criteria

Population	Patients with a hernia, any age
Intervention	Absorbable strap fixation device with a 5mm non-spiral shaft (e.g., STRAP25 by Johnson & Johnson, i.e., Ethicon SECURESTRAP fixation device)
Comparator	Absorbable tack fixation device with a 5mm spiral shaft (e.g., ABSTRACK/ABSTACK30X by Medtronic)
Outcomes	Clinical effectiveness (e.g., absorbency rate [i.e., how long it takes to absorb], rate of re-injury or recurrence, length of hospitalization, patient quality of life, including mobility); Safety (e.g., adverse events, pain, hardware failure, post-operative complications)
Study Designs	Health technology assessments, systematic reviews, randomized controlled trials, non-randomized studies

Results

No relevant health technology assessments, systematic reviews, randomized controlled trials, or non-randomized studies were identified regarding the comparative clinical effectiveness of absorbable strap fixation devices with a 5mm non-spiral shaft versus absorbable tack fixation devices with a 5mm spiral shaft for patients requiring a hernia repair.

References of potential interest that did not meet the inclusion criteria are provided in the appendix.

Overall Summary of Findings

No relevant literature was found regarding the comparative clinical effectiveness of absorbable strap fixation devices with a 5mm non-spiral shaft versus absorbable tack fixation devices with a 5mm spiral shaft for patients requiring a hernia repair; therefore, no summary can be provided.

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-Analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Appendix — Further Information

Randomized Controlled Trials

1. Cristaudo A, Nayak A, Martin S, Adib R, Martin I. A prospective randomised trial comparing mesh types and fixation in totally extraperitoneal inguinal hernia repairs. *Int J Surg*. 2015 May;17:79-82.
PubMed: PM25845302

Alternative Comparator

2. Pawlak M, Hilgers RD, Bury K, Lehmann A, Owczuk R, Smietanski M. Comparison of two different concepts of mesh and fixation technique in laparoscopic ventral hernia repair: a randomized controlled trial. *Surg Endosc*. 2016 Mar;30(3):1188-1197.
PubMed: PM26139491

Pre-Post Study

3. Bougard H, Bringman S, Hope WW, et al. Clinical and patient-reported outcomes after absorbable strap fixation for ventral hernia repair. *Surg Technol Int*. 2017 Dec 22;31:83-92.
PubMed: PM29315451

Review Articles

4. Stoikes N, Voeller GR. New developments in hernia repair: a 2013 update. *Surg Technol Int*. 2013 Sep;23:107-111.
PubMed: PM23700182