

A Systematic Review of Intraoperative Fascial Traction in Hernia Surgery: Techniques and Outcomes

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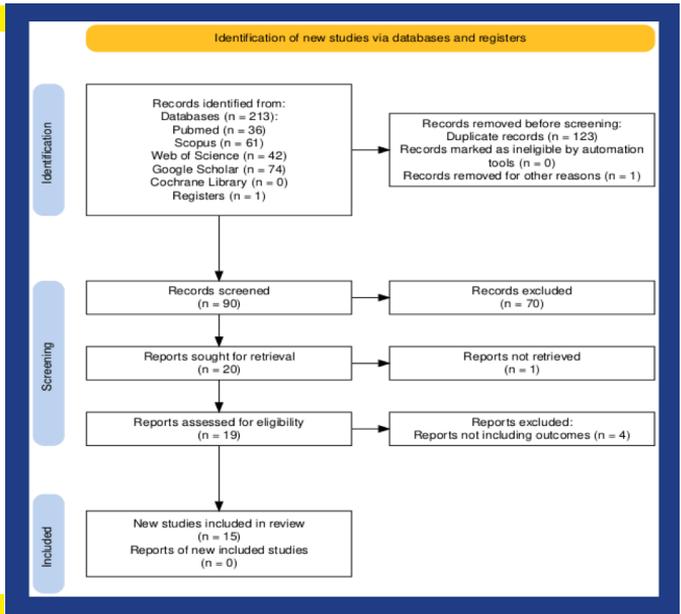
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Aim

To evaluate the techniques and outcomes of the Abdominal Wall Expanding System (AWEX) and Intraoperative Fascial Traction (IFT), in hernia repair, focusing on their effectiveness in achieving complete fascial closure, optimizing surgical outcomes, and minimizing complications. Despite reported benefits and increasing applications globally, evidence on their outcomes and comparative effectiveness remains limited.

Material & Methods

A comprehensive literature search was conducted across PubMed, Google Scholar, and other databases using predefined eligibility criteria. Studies discussing AWEX/IFT in hernia repair and reporting outcomes were included. Data extraction focused on sample size, techniques, hospitalization length, operative time, complications, and recurrence rates.



Results

After a systematic search, 15 studies were identified, ranging from singular case reports to a cohort of 143 patients. Hernia widths ranged from 8 to 25 cm. Midline closure without bridging was reported in 68.9% to 100% of the patients in studies of more than 15 patients. Likewise, Complication rates in these studies varied, from 8% to 40.6%. Operative times varied between 155 and 278 minutes. In all studies reported recurrence, only 2 patients were identified over follow-up periods of 1 to 29 months. Hospital stays ranged from 2.3 to 14.5 days across studies.

Conclusion

Traction techniques demonstrate high efficacy in achieving midline closure with low complication rates, particularly in large hernias. However, data heterogeneity and limited randomized trials highlight the need for further high-quality research. This review reinforces the growing clinical value of traction techniques, particularly their efficacy in achieving high midline closure rates and their safety profile in reducing complications, in managing complex hernias.

