Short Communicaton

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Post-Operative Outcomes of Stapler versus Open Hemorrhoidectomy: A Systematic Review

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Abstract

Hemorrhoidectomy remains a common surgical procedure for treating advanced hemorrhoidal disease. This systematic review aims to compare the post-operative outcomes of stapled hemorrhoidectomy (SH) and conventional open hemorrhoidectomy (OH) based on recent literature published within the last decade. By analyzing comparative studies, we evaluate key parameters including pain, healing time, complications, and patient satisfaction to provide a comprehensive assessment of both surgical techniques.

Keywords: Hemorrhoidectomy; Stapler; Comprehensive Assessment; Surgical Techniques.

INTRODUCTION

Hemorrhoidal disease is a prevalent condition affecting a significant portion of the global population, with surgical intervention often required for advanced stages. Traditionally, open hemorrhoidectomy has been the standard surgical approach. However, the introduction of stapled hemorrhoidectomy in the late 1990s presented an alternative technique promising reduced post-operative pain and faster recovery.

The primary objectives of this review are to:

1. Compare post-operative pain levels between stapler and open hemorrhoidectomy
2. Assess wound healing and recovery times
3. Evaluate complication rates for both surgical methods
4. Analyze long-term patient outcomes and satisfaction

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METHODOLOGY

Literature Search Strategy

A comprehensive literature search was conducted using multiple databases:

- PubMed
- Scopus
- Web of Science
- Google Scholar

Inclusion criteria

- Peer-reviewed articles published between 2014-2024
- Comparative studies of stapler and open hemorrhoidectomy
- Full-text articles available in English
- Studies involving human subjects
- Randomized controlled trials and prospective comparative studies

Exclusion criteria

- Case reports
- Studies with insufficient comparative data
- Articles published before 2014
- Non-English language publications

Data Extraction and Analysis

Relevant data were extracted, including:

- Sample sizes
- Surgical techniques
- Pain scores
- Recovery times
- Complication rates
- Patient satisfaction metrics

RESULTS

Pain Management

Multiple studies have investigated the comparative pain outcomes of stapled and open hemorrhoidectomy. Zhu *et al.* (2015)[1] conducted a systematic review and meta-analysis that initially highlighted the potential pain reduction advantages. Kumar *et al.* (2018)[2] found that patients undergoing stapled hemorrhoidectomy required 40% less analgesic medication during the first week post-surgery. Malik *et al.* (2020)[3] reported significantly lower visual analog scale (VAS) pain scores in the stapled hemorrhoidectomy (SH) group (mean 3.2 ± 1.5) compared to the open hemorrhoidectomy (OH) group (mean 6.7 ± 2.3).

Healing and Recovery

Comparative analyses of healing and recovery times revealed nuanced differences between surgical techniques. Ahmed *et al.* (2019)[4] observed mean wound healing time of 14.3 days for SH versus 21.6 days for OH. Baig and Zmora (2016) [5]conducted a long-term randomized controlled trial exploring recovery outcomes. Nahas *et al.* (2017)[6] provided additional insights into the long-term recovery patterns, supporting the potential benefits of stapled hemorrhoidectomy.

Complication Rates

A comprehensive examination of complication rates was performed by multiple researchers. Jayaraman and Mahadavan (2017)[7] conducted a meta-analysis comparing stapled hemorrhoidopexy with traditional Milligan-Morgan hemorrhoidectomy. Mandava and Chand (2016)[8] evaluated the comparative complication profiles, finding:

	Open Hemorrhoidectomy	Stapler Hemorrhoidectomy
Recurrence Rate	3-5%	4-7%
Bleeding	1.8%	2.1%
Anal Stenosis	2.3%	1.5%

Bucher *et al.* (2015) provided a prospective follow-up study examining long-term surgical outcomes.

Patient Satisfaction

Patient-reported outcomes were extensively studied across multiple research groups. Saxena *et al.* (2016)[9] compared early and late outcomes, revealing key insights into patient experiences. Patient-reported outcomes consistently favored stapled hemorrhoidectomy:

- Higher satisfaction scores in SH group
- Reduced hospitalization time
- Faster return to work and daily activities

DISCUSSION

The comparative analysis reveals that stapled hemorrhoidectomy offers several advantages over traditional open hemorrhoidectomy. The minimally invasive nature of the technique contributes to reduced post-operative pain, faster

healing, and improved patient satisfaction. The comparative analysis synthesizes findings from multiple research studies. Zhu *et al.* (2015) initially highlighted the potential advantages of stapled hemorrhoidectomy. Malik *et al.* (2020) further explored the long-term clinical implications, demonstrating the technique's potential benefits.

However, limitations exist. Long-term follow-up studies are still needed to definitively establish the superiority of one technique over another. Surgeon expertise, patient-specific factors, and hemorrhoid severity remain crucial in determining the most appropriate surgical approach.

CONCLUSION

Stapled hemorrhoidectomy demonstrates promising outcomes across multiple parameters. While not universally superior, it presents a valuable alternative to traditional open hemorrhoidectomy, particularly for patients prioritizing faster recovery and reduced post-operative discomfort.

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