

Long Term Outcomes Of Umbilical Hernia Repair - Literature Review

Dr. Shivani Deodhar, Dr. Sameeran Sahasrabudhe, Dr Rishikesh Valase, Dr.
Ananta Kulkarni

1Intern, 2Intern, 3Intern, 6Head Of Department

Department Of Surgery

Bharat Ratna Atal Bihari Vajpayee Medical College

Pune, India

Abstract

Umbilical hernia repair is a frequently performed surgery with outcomes that vary in the long run. This review brings together findings from existing studies on the long-term results of these repairs, focusing on how often hernias come back, the factors that contribute to recurrence, and how different surgical techniques compare. Even with advancements in surgery, understanding these long-term effects is crucial to improving care for patients.

Keywords: Umbilical hernia repair, Open surgery, Laparoscopy, Hernia recurrence, Mesh repair

Date of Submission: 16-11-2024

Date of Acceptance: 26-11-2024

I. Introduction

Umbilical hernias are quite common in adults, making up about 15% of all hernia cases, with the majority being acquired rather than congenital. Despite their prevalence, there is no universally accepted standard for how these hernias should be repaired, and there is ongoing debate about the best surgical technique. The likelihood of a hernia returning after surgery varies widely, with reported rates ranging from as low as 1% to as high as 43%. The reasons behind this variability are not fully agreed upon in the literature.

Certain studies, such as those by Asolati and colleagues, suggest that conditions like type 2 diabetes, high cholesterol, and HIV can increase the risk of hernia recurrence. Obesity, defined as having a body mass index (BMI) over 30, is another significant risk factor, likely due to the higher intra-abdominal pressure that obese patients experience. Additionally, patients with another hernia at the time of repair or those with hernia defects larger than 2 cm are more prone to recurrence. The use of mesh in repairs appears to lower these risks.

However, there hasn't been much research that looks at a broad range of patient and surgical factors to fully understand what predicts hernia recurrence. Moreover, studies with follow-up periods longer than 7 years are rare, leaving a gap in our knowledge about the long-term outcomes of umbilical hernia repair. This review aims to assess the long-term risks of hernia recurrence and explore how different patient characteristics and surgical techniques influence these outcomes.

II. Objective

To gain a deeper understanding of the factors that contribute to the long-term success or failure of umbilical hernia repairs.

III. Recurrence Rates And Influencing Factors

The recurrence of umbilical hernias after surgery is a major concern, with reported rates fluctuating between 1% and 43%. This variation can be attributed to several factors, including the patient's health, the size of the hernia, and the surgical method used.

1. Patient Characteristics: Research has highlighted several patient-related factors that are linked to a higher risk of hernia recurrence. For example, Asolati et al. found that conditions such as type 2 diabetes, high cholesterol, and HIV increase the likelihood of recurrence. Obesity, particularly when BMI exceeds 30, also poses a significant risk, likely due to the increased pressure within the abdomen that these patients experience.

2. **Hernia Defect Size:** Larger hernias tend to have higher recurrence rates. Defects larger than 2 cm are particularly prone to returning after repair, which suggests that the size of the hernia should influence the choice of surgical technique.

3. **Surgical Techniques:** The method of repair plays a critical role in long-term outcomes. Traditional techniques that rely on primary suturing often have higher recurrence rates compared to mesh-based repairs. Using mesh, particularly synthetic or biologic types, offers additional support to the abdominal wall and has become the preferred method in many cases.



Image- Pre Operative Photo Of Hernia



Image- Incision Taken For Open Hernia Repair Surgery.

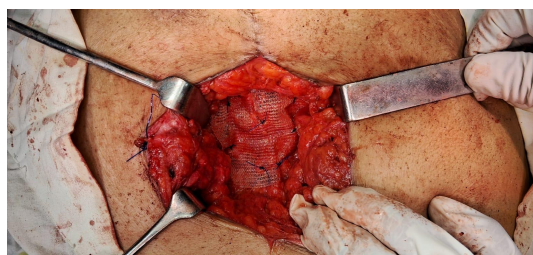


Image- Mesh Placement At The Site Of Defect

IV. Long-Term Follow-Up And Surgical Efficacy

A crucial part of evaluating the success of umbilical hernia repairs is the length of time patients are monitored after surgery. Many studies have follow-up periods of 1 to 5 years, but there's a lack of research looking at outcomes beyond 7 years. Longer-term studies are essential to fully understand how durable these repairs are and to identify any late complications or recurrences.

Recent studies have highlighted the benefits of laparoscopic repair, which generally results in less pain and faster recovery compared to open repair. However, the long-term effectiveness of laparoscopic versus open techniques still needs more investigation to draw definitive conclusions.

V. Conclusion

Repairing an umbilical hernia is a common surgical procedure, but the long-term outcomes can vary widely. The recurrence of hernias depends on a range of factors, including the patient's health, the size of the hernia, and the chosen surgical technique. Mesh-based repairs have shown to be more effective in reducing recurrence rates, but more research with longer follow-up periods is needed to fully understand the long-term implications of different repair methods. As surgical techniques continue to evolve, a deeper understanding of the factors that influence recurrence will be key to improving patient outcomes and guiding best practices in umbilical hernia repair.

References

- [1] Umbilical Hernia Repair And Recurrence: Need For A Clinical Trial?
<https://doi.org/10.1186/S12893-021-01358-1>
<https://bmc Surg.biomedcentral.com/articles/10.1186/S12893-021-01358-1>
- [2] Factors Associated With Long-Term Outcomes Of Umbilical Hernia Repair
Doi:10.1001/Jamasurg.2016.5052
<https://jamanetwork.com/journals/jamasurgery/fullarticle/2599143>
- [3] The Impact Of Urgency Of Umbilical Hernia Repair On Adverse Outcomes In Patients With Cirrhosis: A Population-Based Cohort Study From England
<https://link.springer.com/article/10.1007/S10029-023-02898-6>