

Bariatric surgery: The hidden hernia risk you're missing

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Metabolic and bariatric surgery (MBS) offers a definitive intervention for severe obesity, but the patient population presents unique surgical challenges. One such challenge, often underestimated, is the high prevalence of abdominal wall hernias in candidates even before their primary bariatric procedure. This pre-existing burden complicates surgical planning and recovery, demanding a tailored approach to patient assessment and management, according to a narrative review published in J Metab Bariatr Surg.¹

KEY TAKEAWAYS

- **The Pivot:** A substantial proportion of bariatric surgery candidates already have abdominal wall hernias, complicating surgical strategy.
- **The Data:** Ventral hernias are prevalent in 8% to 20% of MBS candidates, with trocar site hernia rates reaching 34% to 40% in bariatric patients.
- **The Action:** Clinicians must maintain a high index of suspicion for both pre-existing and post-operative hernias, tailoring repair strategies to individual patient risk factors.

Patients presenting for metabolic and bariatric surgery often carry a complex medical history, with obesity itself contributing to several anatomical and physiological vulnerabilities. Chronic elevation of intra-abdominal pressure, coupled with impaired wound healing mechanisms inherent to morbid obesity, creates a fertile ground for fascial defects. This underlying pathology means that many patients are already at increased risk for hernias, both before and after their bariatric procedure.¹

A narrative review by Kim and colleagues, published in J Metab Bariatr Surg, explored the incidence, risk factors, and management strategies for hernias in this specific population. The authors synthesized evidence from numerous studies, highlighting the distinct challenges faced by bariatric patients. Their work demonstrates the need for a comprehensive understanding of hernia prevalence and its implications for surgical outcomes.¹

The Extent of the Problem

The prevalence of abdominal wall hernias in candidates for metabolic and bariatric surgery is notably higher than in the general surgical population. Ventral hernias, including incisional and umbilical defects, affect 8% to 20% of MBS candidates. This figure represents a significant comorbidity that surgeons must account for during pre-operative assessment and intra-operative planning.¹

Beyond pre-existing hernias, bariatric patients face an elevated risk of developing trocar site hernias (TSHs) post-operatively. Prospective studies indicate TSH incidence can reach 34% to 40% in bariatric cohorts. This contrasts

sharply with general laparoscopic surgery, where TSH rates typically range from 0.1% to 1.5%. The sheer magnitude of this difference demands specific preventative and management protocols for bariatric procedures.¹

The mechanisms driving this increased risk are multifactorial. Morbid obesity itself contributes to chronic elevated intra-abdominal pressure, which strains fascial integrity. But impaired wound healing, often exacerbated by comorbidities like diabetes, further compromises surgical site integrity. These factors combine to create a challenging environment for fascial closure and long-term wound stability.¹

The implications extend beyond the immediate surgical period. A high incidence of hernias, both pre-existing and new, can lead to chronic pain, incarceration, strangulation, and repeated surgical interventions. This adds to the overall morbidity and healthcare burden for a patient population already managing complex health issues. Understanding how obesity rates climb and their broader impact on clinical practice becomes essential for anticipating these complications.¹

Management and Prevention Strategies

Managing hernias in bariatric patients requires a careful balance between concurrent and staged repair. Concurrent repair of small defects during the primary bariatric surgery is generally considered safe. But this approach carries a higher mesh infection rate of 3.6% compared to staged repairs, which see an infection rate of 1.9%. This difference, while seemingly small, can have significant consequences for patient recovery and long-term outcomes.¹

Synthetic mesh is essential for reducing recurrence rates. Without mesh, recurrence rates can be as high as 25.7%. With synthetic mesh, this drops dramatically to 1.1%. The choice between concurrent and staged repair, and the decision to use mesh, must be individualized, weighing the risks of infection against the benefits of reduced recurrence.¹

Prevention of TSHs hinges on meticulous surgical technique. Safe primary access methods, such as Palmer's point or optical trocars, can minimize initial fascial trauma. But the most critical step involves meticulous fascial closure of larger port sites, particularly those used for specimen extraction. Hernia rates at these sites can reach 22.4% if not properly closed.¹

Beyond surgical technique, managing modifiable comorbidities plays a vital role in minimizing 30-day wound morbidity. Strict control of diabetes and cessation of smoking are paramount. These systemic factors directly influence wound healing and infection risk, making their optimization a non-negotiable component of pre-operative and post-operative care. Clinicians should also consider how emerging pharmacotherapies might impact overall patient health and surgical risk profiles.¹

The narrative review itself, while comprehensive, relies on existing literature and does not present new primary data. This means the strength of its conclusions is inherently tied to the quality and consistency of the studies it synthesizes. The variability in reporting standards and patient populations across different studies could introduce heterogeneity, making definitive comparisons challenging. Still, the consistent trends observed across multiple sources lend credibility to the reported prevalence and risk factors.¹

Another paper, by Cremona and colleagues in JAMA Netw Open, also touched on the broader context of obesity definitions and their clinical implications for bariatric surgery. While its abstract largely mirrored the hernia review, it highlights the interconnectedness of defining obesity and understanding its surgical sequelae. A clearer, globally standardized definition of clinical obesity could refine patient selection and risk stratification for MBS, indirectly impacting hernia prevalence and management.²

Xia and colleagues, in Obes Rev, explored health literacy in severe obesity. While seemingly tangential, patient

understanding of their condition, surgical risks, and post-operative care directly influences adherence to lifestyle modifications and comorbidity management. Poor health literacy could indirectly contribute to higher rates of complications, including hernias, by impeding effective self-management of diabetes or smoking cessation. This emphasizes the need for clear, accessible patient education.³

The clinical implications of these findings are clear: a high index of suspicion for TSH and a tailored approach to hernia repair are necessary to optimize long-term surgical outcomes in bariatric patients. This requires careful pre-operative screening, meticulous intra-operative technique, and robust post-operative follow-up. For a comprehensive understanding of patient management in this complex area, a resource like the Oxford Handbook of Endocrinology and Diabetes can be invaluable.¹

CLINICAL IMPLICATIONS

The data on hernia prevalence in bariatric surgery candidates is a stark reminder that obesity is not merely a weight issue; it is a systemic disease with profound anatomical consequences. Clinicians must move beyond a simple BMI calculation and conduct thorough pre-operative assessments that actively screen for existing fascial defects. Ignoring a pre-existing ventral hernia or underestimating the risk of a trocar site hernia is a disservice to the patient and an invitation for complications.

The choice between concurrent and staged hernia repair demands careful consideration. While concurrent repair offers convenience, the increased mesh infection rate, even if modest, cannot be dismissed. Surgeons must weigh this against the patient's overall health, comorbidity burden, and the specific characteristics of the hernia. This is not a one-size-fits-all decision.

For general practitioners, the message is equally clear: optimizing modifiable risk factors like diabetes control and smoking cessation is not just about general health; it directly impacts surgical outcomes, including wound healing and hernia risk. This pre-operative preparation is a shared responsibility, extending beyond the surgical team. The long-term success of bariatric surgery hinges on this holistic approach.

The industry, too, has a role. Development of new surgical tools and techniques that further reduce fascial trauma during port placement, or innovative mesh materials with lower infection risks, would be welcome. But until then, meticulous adherence to established best practices remains the cornerstone of preventing these common and often debilitating complications.

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