

Can Early Minimally Invasive Intervention Improve Patient Outcomes in Setting of Adhesive Small Bowel Obstruction?

Zeeshan Razzaq

Consultant General Surgeon, St. Luke's General Hospital, County Kilkenny, Republic of Ireland

Correspondence:

Dr Zeeshan Razzaq

Consultant General Surgeon, St. Luke's General Hospital,

County Kilkenny, Republic of Ireland

Email: drzrazzaq@gmail.com

Article info:

Received: March 31, 2024

Accepted: August 11, 2024

Funding Source: Nil

Conflict of interest: Nil

Cite this article. Razzaq Z. Is Index Admission Laparoscopic Cholecystectomy the Preferred Management Strategy for hot Gall Bladders in 2024. J Fed Med Coll 2024. 2024; 1 (2): 80-81

Acute small bowel obstruction (SBO) is a common emergency department (ED) presentation. SBO accounts for approximately 500,000 admissions from the ED annually in the United States (U.S.), including 15-20 percent of all admissions with acute abdominal pain and 80 percent of all bowel obstructions.¹

The most common causes of SBO include adhesions from previous surgeries, obstructed and internal hernias, and, less commonly, small bowel malignancies.²

Surgical intervention for non-resolving SBO is frequently required, is one of the commonly performed emergency general surgery operation, with over 300,000 emergency laparotomies undertaken in the U.S. on average annually.³

Traditionally, adhesive SBO was managed surgically via midline laparotomy and adhesiolysis. However, with the advancements in minimally invasive surgery, laparoscopic adhesiolysis has now become the gold standard approach in most of the cases replacing open surgery. Robot-assisted procedures are also emerging in emergency settings.⁴

In terms of timing of surgical intervention in SBO, immediate surgery is warranted in cases of obstructed hernias, internal herniation, peritonitis, perforation, or ischemia. However, the timing of surgery for uncomplicated adhesive SBO remains debated.⁵

Historically, the surgical dictum "the sun should never rise and set on a patient with unresolved SBO"

advocated for early surgical intervention. Yet, concerns over vicious cycle of recurrent adhesions post-surgery have led to a more conservative approach, delaying surgery and sitting tight on adhesive SBO for 48–72 hours.⁶

The caveat with this surgical delay, however, poses risks of ischemia, perforation, and subsequent peritonitis, increasing both morbidity and mortality. Additionally, with laparoscopic surgery now replacing majority of emergency laparotomy for SBO caused by bands and adhesions, concerns about recurrent adhesions are diminishing due to minimal bowel handling. In fact, evidence is suggesting that there is four times less risk of adhesive SBO post laparoscopic surgery when compared to open surgery.⁷

Many cases of adhesive SBO do not resolve with conservative management ("drip and suck"). There now is good evidence to suggest that early laparoscopic intervention in adhesive SBO reduces hospital length of stay and hence healthcare costs, hastens recovery, and reduces morbidity, such as wound infection and incisional hernia associated with open surgery.⁸

Given the above evidence, early laparoscopic intervention for adhesive SBO is increasingly recognized as the optimal approach, improving patient outcomes while mitigating risks associated with delayed surgery.

References

1. Frasure SE, Hildreth A, Takhar S, Stone MB. Emergency department patients with small bowel obstruction: What is the anticipated clinical course? *World J Emerg Med.* 2016;7(1):35-9. doi: 10.5847/wjem.j.1920-8642.2016.01.006.
2. Baiu I, Hawn MT. Small Bowel Obstruction. *JAMA.* 2018;319(20):2146. doi:10.1001/jama.2018.5834
3. Schick MA, Kashyap S, Collier SA, et al. Small Bowel Obstruction. [Updated 2025 Jan 19]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK448079>
4. Liang JT, Liao YT, Chen TC, Huang J, Hung JS. Changing patterns and surgical outcomes of small bowel obstruction in the era of minimally invasive surgery for colorectal cancer. *Int J Surg.* 2024 Mar 1;110(3):1577-1585. doi: 10.1097/JIS9.0000000000000980.
5. Cho YJ, Park IS, Kim J, Cho HJ, Gwak GH, Yang KH, et al. Factors Predicting the Need for Early Surgical Intervention for Small Bowel Obstruction. *Ann Coloproctol.* 2020 Aug;36(4):223-228. doi: 10.3393/ac.2019.09.30.
6. Lee SY, Park KJ, Ryoo SB, Oh HK, Choe EK, Heo SC. Early postoperative small bowel obstruction is an independent risk factor for subsequent adhesive small bowel obstruction in patients undergoing open colectomy. *World J Surg.* 2014 Nov;38(11):3007-14. doi: 10.1007/s00268-014-2711-z
7. Angenete E, Jacobsson A, Gellerstedt M, Haglind E. Effect of laparoscopy on the risk of small-bowel obstruction: a population-based register study. *Arch Surg.* 2012 Apr;147(4):359-65. doi: 10.1001/archsurg.2012.31
8. Burton E, McKeating J, Stahlfeld K. Laparoscopic management of a small bowel obstruction of unknown cause. *JSLs.* 2008 Jul-Sep;12(3):299-302. PMID: 18765057