Advances in Surgery 51 (2017) 125–140

ADVANCES IN SURGERY

Who Should Manage Patients with Adhesive Small Bowel Obstruction?

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Keywords

• Adhesive small bowel obstruction • Primary service • Admitting service
• Health services research

Key points

- Adhesive small bowel obstruction (SBO) is a common complication after abdominal surgery and is associated with high health care utilization and cost.
- Because most patients are now successfully managed nonoperatively, there has been an increase in the number of patients with adhesive SBO admitted to medical services.
- Several retrospective studies have demonstrated that admission of adhesive SBO patients to a medical service is associated with a delayed time to operative intervention, longer length of stay (LOS), higher cost, and a higher operative mortality rate compared with admission to a surgical service.
- Although these findings support management of adhesive SBO patients by primary surgical teams, future research should focus on identifying differences in management across providers and the impact of standardized management protocols on limiting practice variation.

Disclosure Statement: Dr F.J. Fleming received personal fees from UpToDate unrelated to the current work. Dr C.T. Aquina has nothing to disclose.

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http://dx.doi.org/10.1016/j.yasu.2017.03.010

INTRODUCTION

> There exists a feeling among physicians and students that anything over 10 years old has no pertinence…If you only look forward, it's tantamount to having a physician with total amnesia. How good would he be?
>
> —Owen Wangensteen [1]

Until the pioneering work of Owen Wangensteen in the 1930s, bowel obstruction was nearly universally fatal. Before his publications, most surgeons believed that death from this condition was secondary to toxic factors in the bowel and their absorption into the blood stream. They attributed gaseous distention to the production of methane from bacteria acting on retained food, and patients rarely survived operative intervention. Through various experiments, however, Wangensteen demonstrated that abdominal distention was due to swallowed air and that bowel decompression using nasogastric tubes successfully treated both experimental animals and patients with bowel obstruction. Patients could then undergo an operation safely or avoid surgery altogether in many circumstances. This groundbreaking work introduced the concept of nonoperative management of adhesive SBO [1].

Adhesive disease after abdominal surgery remains the most common cause of SBO and accounts for 49% of cases of SBO [2]. Despite increases in the use of laparoscopy and some evidence that a laparoscopic approach decreases the risk of SBO [3,4], this long-term complication occurs in up to one-third of postoperative patients and accounts for 1 million inpatient hospital days and $2 billion in inpatient cost each year in the United States [5]. Given that most patients with adhesive SBO are now successfully managed nonoperatively, many patients with adhesive SBO are admitted to medical or hospitalist services rather than primary surgical services [6–9]. Given that adhesive SBO is a potential surgical emergency, however, whether all cases of adhesive SBO should be managed primarily by surgeons remains a controversial topic, and wide variation exists across hospitals regarding the choice of primary service for these patients [10]. This article reviews the current literature on differences in outcomes between primary medical and surgical services for patients admitted to the hospital with adhesive SBO and possible strategies at improving the management of these patients.

HISTORICAL CONTEXT

Since the introduction of nasogastric tube decompression, originally known as Wangensteen suction, successful management of adhesive SBO is most often achieved through conservative measures. In fact, 65% to 80% of patients are successfully managed without operative intervention [6–9], and, despite the adage, "the sun should never rise and set on a complete bowel obstruction," [11] recent studies have demonstrated that even high-grade or complete SBO can be safely and successfully managed with nonoperative management in 41% to 73% of patients [7,9,12]. This high success rate is largely in part to