Incisional hernia in Day Surgery: our personal experience

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SUMMARY: Incisional hernia in Day Surgery: our personal experience.

Incisional hernia is one of the most common complications of laparotomy. Its repair with prosthesis has enabled a considerable improvement in the outcome, significantly reducing recurrences. This study analyses the results of open hernioplasty with mesh performed as a Day Surgery procedure in 42 patients between November 2008 and October 2010. The results were good, with low postoperative morbidity and recurrences (2.4%).

KEY WORDS: Incisional hernia - Open hernioplasty - Day Surgery.

Introduction

Recent prospective studies with long-term follow-up suggest that the incidence of incisional hernia is 11-20% (1, 2), arising within three years of surgery in 90% of cases. Incarceration-related morbidity ranges from 6% to 15%, with 2% of these cases resulting in intestinal strangulation (3).

Recurrence after a first repair attempt varies from 24% to 54% (4). Repair by prosthesis is more successful, but recurrence is still high (up to 36%) (5). Recurrence after open hernioplasty of recurring incisional hernias can reach up to 48% (6). A nationwide study in Italy revealed that most surgeons currently use prosthesis in 60% of initial incisional hernias and 85% of recurrences (9).

Incisional hernia is classified on the basis of three essential criteria, deriving from precise anatomic and clinical knowledge of the abdominal wall: location, size, and any loss of tissue. They are thus classified as: median or para-median; small (<5 cm: type 1), medium (<10 cm: type 2), or large (>10 cm: type 3); trocar site (type 4); and hernias involving major loss of tissue and function of the abdominal wall (type 5), described as incisional hernia disease (7, 8).

There are numerous causes of incisional hernia, which can be classified in three main categories: mechanical; related to the patient's general condition; and related to the technique. The first group includes all postoperative conditions causing an increase in intra-abdominal pressure, such as paralytic ileus and delayed return of normal bowel function. Other situations that can help create permanent or repetitive tension on the abdominal wall include chronic cough, impaired respiratory function (typical in patients with chronic obstructive pulmonary disease [COPD]), frequent vomiting, and excessive physical exertion (10). Factors related to the patient include malnutrition, diabetes mellitus, infection, and obesity. Malnutrition can impair the healing
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Incisional hernias can develop for a number of reasons, including an imbalance between intra-abdominal pressure and the myofascial tension induced by the surgical scar or by a gap in the tissues. The results reported herein,
while referring to a relatively small caseload, demonstrate that the validity and reliability of day surgery treatment of these hernias can be satisfactory. Naturally, patients must be carefully selected (age, obesity, malnutrition, and important comorbidities such as anemia, diabetes mellitus, cancer, and renal, cardiac or respiratory diseases).

Another important factor with respect to surgical technique is the tension induced by the suture, which can have an impact on the possible development of tissue necrosis, one of the factors implicated in wall infections (19). The right timing of the procedure also seems to be fundamental for both the results of the procedure itself and the prevention of complications requiring the patient to be admitted to the inpatients ward. Although incisional hernias generally worsen with time, careful and sometimes prolonged preoperative preparation may be indicated, as well as important postoperative measures.

The main points of pre- and postoperative treatment are as follows:

1) preoperative evaluation of respiratory function through static and dynamic spirometry and blood gas analysis and, if necessary, respiratory kinesitherapy;
2) local preparation to achieve meticulous skin disinfection; any skin folds, which are often present - especially in the groin area - and can cause extensive intertrigo, must be spread, treated with antibiotics and antymycotics and kept dry at all times;
3) weight loss in obese patients, with the aims of both facilitating general and local preoperative preparation and improving the results, especially with respect to postoperative morbidity;
4) antibiotic prophylaxis, to be administered in a single bolus during the induction of anesthesia;
5) respect of asepsis during surgery and dressing of the wound;
6) careful hemostasis and insertion of a continuous suction drain to prevent blood and serum build-up, which could lead to infection and thus compromise the success of the procedure.

Conclusions

The search for fast, simple, complication-free techniques that can be performed under local anesthetic and minimize postoperative pain has led to a large number of incisional hernias being treated in day surgery. The benefits for patients include greater convenience and reduced waiting list. The authors do not believe in a “one size fits all” approach to these hernias. Instead, the best practice must be established for each type. The objective is a rapid, easy, complication-free procedure guaranteeing the best results (8). We prefer polypropylene implants for their biophysical properties and low incidence of postoperative infections, which thus contribute to reduce complications affecting the intestine and abdominal wall.

References