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Hernia surgery

1. Review

The current status of watchful waiting for inguinal hernia management: a review of clinical evidence

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Cite this article: McBee PJ, Fitzgibbons, Jr RJ. The current status of watchful waiting for inguinal hernia management: a review of clinical evidence. *Mini-invasive Surg* 2021;5:17. <http://dx.doi.org/10.20517/2574-1225.2021.08>

Abstract

Inguinal hernias are a very common problem and the most common reason for primary care physicians to refer patients for surgery. The diagnosis is usually made from history and physical examination and men are significantly more likely to be affected than women. Most patients will present with a painful bulge in the groin, though up to a third of patients will be asymptomatic at the time of diagnosis.

Previously, it had been recommended that all hernias be repaired surgically at the time of diagnosis to prevent the development of a hernia accident (bowel obstruction or strangulation) that would require emergent surgery, which is associated with much higher morbidity and mortality than an elective repair. However, several clinical trials have reported that risks of a hernia accident are sufficiently low so that a “watchful waiting” (WW) approach for male patients who are asymptomatic or minimally symptomatic is a safe management strategy. WW spares patients any risk of operative complications related to their herniorrhaphy, perhaps the most significant of which is post-herniorrhaphy groin pain that has only recently been appreciated as a significant issue. Although WW has now been proven to be safe in asymptomatic males with an inguinal hernia, long-term results of randomized controlled trials have shown that most patients initially managed with WW will eventually elect to have the hernia surgically repaired primarily due to increased pain. The purpose of this article is to review the current evidence on watchful waiting for the management of inguinal

hernias.

2. Review

Is mesh fixation in TAPP and TEP still necessary?

[HTML](#) [PDF](#)

Cite this article: Fortelny RH. Is mesh fixation in TAPP and TEP still necessary?.

Mini-invasive Surg 2021;5:16. <http://dx.doi.org/10.20517/2574-1225.2021.21>

Abstract

One of the most serious complications after inguinal hernia repair is still the occurrence of chronic pain. The literature describes rates of severe chronic pain of 3%-6%. Laparo-endoscopic inguinal hernia repair is favored to prevent postoperative pain through a minimally invasive approach and sparing of the layers of tissue covering nerves and vessels in terms of reduced risk of damage to these structures. However, the method of fixation of the mesh is still controversial discussed. The use of these penetrating devices such as staples and staplers has been shown to often be complicated by injury to nerves and vessels and occurrence of postoperative pain. The shift to completely atraumatic fixation using adhesives (fibrin glue, cyanoacrylate) began in the early part of this century. Several studies confirmed less postoperative pain after mesh fixation by glue compared to stapler or tacker. Historically, the TEP technique has always been performed without any fixation. Several studies comparing fixation versus non-fixation have been performed in TEP repair and found results with no increase in recurrence rate. Notwithstanding that very few studies comparing fixation versus no fixation with exclusion of large medial inguinal hernias have been published on this topic in TAPP repair, identical results to those with TEP repair were obtained. On the basis of current evidence, no mesh fixation is recommended for laparo-endoscopic inguinal hernia repair except for large medial and combined inguinal hernias. If mesh fixation is required, atraumatic techniques should be used.

3. Review

Large hiatal hernia: minimizing early and long-term complications after minimally invasive repair

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Cite this article: Ugliono E, Rebecchi F, Seno E, Morino M. Large hiatal hernia: minimizing early and long-term complications after minimally invasive repair. *Mini-invasive Surg* 2021;5:2. <http://dx.doi.org/10.20517/2574-1225.2020.93>

Abstract

Paraesophageal Hernia (PEH) is the protrusion of the stomach and/or other abdominal viscera into the mediastinum due to an enlargement of the diaphragmatic hiatus. The treatment of PEH is challenging: On the one hand, watchful waiting carries the risk of developing acute life-threatening complications requiring an emergency operation. On the other hand, elective repair of PEH has non-negligible morbidity and mortality rates, also due to the characteristics of PEH affected patients, who are generally elder and frail. A review of the literature is presented to highlight strategies that can be adopted to minimize early and long-term complications after PEH surgical repair. The laparoscopic approach has been shown to provide reduced hospital stay, postoperative morbidity and mortality, and overall costs compared to traditional open surgery, and it is currently considered the standard approach both to elective and emergency operations. The evidence suggests that strict adherence to surgical principles, such as hernia sac excision, extended mediastinal dissection of the esophagus, and tension-free crural repair with or without mesh are mandatory to achieve optimal surgical outcomes and reduce PEH recurrence rate. Different shapes, materials, and techniques of prosthetic repair and the use of relaxing incisions have been proposed, but long-term data are lacking, and no conclusions can be drawn regarding the ideal method of crural closure. When a short esophagus is recognized despite extensive mediastinal dissection, esophageal lengthening procedures are indicated. Systematic addition of a fundoplication is strongly encouraged, for either treating

gastroesophageal reflux or reducing recurrence rate.

4. Technical Note

Mastering TAPP inguinal hernia repair-tips and tricks

[HTML](#) [PDF](#) [VIDEO](#)

Cite this article: Ielpo B. Mastering TAPP inguinal hernia repair-tips and tricks. *Mini-invasive Surg* 2021;5:10. <http://dx.doi.org/10.20517/2574-1225.2021.01>

Abstract

Laparoscopic minimally invasive surgery is increasing, and in the last decade some modifications of the technique have been introduced, especially concerning mesh type, fixation, and peritoneal closure, which are herein individually discussed. Currently, a standard unique technique is still missing, and modifications of the technique might be useful in challenging cases, such as the use of fibrine glue to both fix the mesh and close the peritoneum. The aim of this technical note essay is to discuss and update some tips and tricks as well as recent modifications of the trans-abdominal preperitoneal (TAPP) repair of groin hernia.

5. Original Article

Desarda technique as a valuable alternative for inguinal hernia patients refusing mesh implantation: long-term results fifteen years after a pure tissue repair in 198 patients

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Cite this article: Mitura K, Rzewuska A, Skolimowska-Rzewuska M, Wyrzykowska D. Desarda technique as a valuable alternative for inguinal hernia patients refusing mesh implantation: long-term results fifteen years after a pure tissue repair in 198 patients. *Mini-invasive Surg* 2021;5:22.

<http://dx.doi.org/10.20517/2574-1225.2021.19>

Abstract

Aim: The aim of the study was to retrospectively analyze long-term results of surgical treatment of patients diagnosed with primary inguinal hernia up to 15 years after a Desarda pure tissue repair.

Methods: The study was conducted on a group of adult patients with primary inguinal hernia who underwent elective surgery at our center during 2005-2006. Patients' data and hernia and surgery characteristics were recorded. Incidence of postoperative complications was assessed seven days after surgery. An attempt was made to contact all patients 15 years after the procedure regarding recurrence, possible surgical re-treatment, pain, and satisfaction.

Results: Desarda procedure was performed in 341 patients. Fifteen years after the surgical procedure, a follow-up was successful in 215 (63%) patients, of whom 198 (58.1%) answered all of the questions. In the early perioperative period, minor postoperative complications were found in 5.6% of patients. After 15 years of follow-up, three recurrences were found (1.5%). Recurrences occurred 2, 3, and 5 years after the surgery. All patients expressed their satisfaction with the treatment. Twenty-eight patients (14.4%) reported a rare occurrence of mild pain while performing certain activities. Three patients reported persistent chronic pain (1.5%).

Conclusion: Surgical repair of primary inguinal hernia using the Desarda technique is a simple, feasible, repeatable procedure, using the patient's own tissues, and with a low learning curve. It seems that the Desarda repair can still be a safe alternative to other non-mesh surgical techniques, especially when the patient refuses the use a synthetic mesh.

6. Review

Comparison of open and laparoscopic inguinal hernia repair

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Cite this article: Burton V, Perez AJ. Comparison of open and laparoscopic inguinal hernia repair. *Mini-invasive Surg* 2021;5:26.

<http://dx.doi.org/10.20517/2574-1225.2021.26>

Abstract

Inguinal hernia repair is one of the most commonly performed general surgery operations. Throughout the years there have been many variations and advancements, including open and laparoscopic techniques, to accomplish the same task of reducing herniated contents and preventing groin hernia recurrence. An array of factors contributes to deciding which operative technique is the best approach to managing a patient presenting with an inguinal hernia. Published data vary due to the heterogeneity of techniques compared, patient presentations, and surgeon expertise. In experienced hands, laparoscopic repair results in a quicker return to work and reduced postoperative pain. Patients with bilateral groin hernias, female patients with groin hernias, and patients with recurrent hernias after prior anterior mesh repair should be offered a laparoscopic preperitoneal mesh approach, when surgeons have the appropriate skill set and experience. We find that open and laparoscopic techniques of inguinal hernias can both achieve exceptional outcomes when applied to the right patient population. To know one's own capabilities, it is beneficial for surgeons to have baseline familiarity of the multitude of methods of repair, become proficient in both mesh and mesh-free techniques as well as open and laparoscopic techniques to best tailor the surgery to the patient and the clinical circumstances, and follow personal outcomes to evaluate individual results.

7. Technical Note

Management of hernial orifices in robotic inguinal hernia repair

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Cite this article: Baur J, Ramser M, Dietz UA. Management of hernial orifices in robotic inguinal hernia repair. *Mini-invasive Surg* 2021;5:27.

<http://dx.doi.org/10.20517/2574-1225.2021.28>

Abstract

The development of a postoperative seroma after endoscopic transabdominal (TAPP) or extraperitoneal (TEP) groin repair is a frequent problem. Although seromas are usually only mildly symptomatic, the swelling that develops postoperatively often causes patients to feel insecure and worried. In the literature some technical approaches to reduce the incidence of postoperative seroma are described. This technical note deals with the authors' approach in the management of large medial and lateral hernial orifices during robotic r-TAPP procedures using DaVinci Xi technology with the aim of seroma prophylaxis.

8. Opinion

Robotic-assisted approach for complex inguinal hernias

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Cite this article: Malcher F, Lima DL, Lima RNCL, Sreeramoju P. Robotic-assisted approach for complex inguinal hernias. *Mini-invasive Surg* 2021;5:31.

<http://dx.doi.org/10.20517/2574-1225.2021.48>

Abstract

Laparoscopic inguinal hernia repair was introduced in the early nineties as a minimally invasive alternative to the classic Lichtenstein repair. Over the decades, minimally invasive approaches have demonstrated both postoperative benefits and easy replicability. Robotic inguinal hernia repair has been shown as a safe alternative to laparoscopic repair. Furthermore, due to technical difficulties, complex inguinal hernia repairs (scrotal hernias, incarcerated hernias, recurrent hernias, mesh removal, and previous pelvic surgery) are a relative contraindication for laparoscopic repairs. In this article, we highlight the advantages of the robotic approach for complex cases of inguinal hernia.

9. Review

Total extraperitoneal hernia repair and its associated pitfalls

[HTML](#) [PDF](#)

Cite this article: Alam N, Sheen AJ. Total extraperitoneal hernia repair and its associated pitfalls. *Mini-invasive Surg* 2021;5:48.

<http://dx.doi.org/10.20517/2574-1225.2021.65>

Abstract

Minimally invasive surgery over the last three decades has provided a credible alternative for the treatment of inguinal hernias. One of the main techniques involved utilises the creation of an extraperitoneal space, thereby avoiding the need to enter the abdominal cavity. The totally extraperitoneal (TEP) inguinal hernia repair is described as well as the common and more serious complications that are possible. TEP has a proven track record of expertise for the surgical treatment of inguinal hernias, but has a steeper learning curve, with more serious complications such as vascular and bladder injuries, which are explored in more detail. The key to managing any such serious complications is early recognition. Rectus sheath hematomas secondary to inferior epigastric artery injury usually require only conservative measures such as close observation with the requirement for any embolization of any arterial bleed a rare event. Bladder injuries if recognized at the time of surgery require immediate repair, with late presentation inevitably needing more invasive intervention for a potentially septic patient. TEP remains an excellent repair with caveats of serious complications which are rare at < 0.5% however, they must be discussed and be part of the consent process prior to any repair taking place.

10. Case Report

Laparoscopic mesh repair of strangulated groin hernias requiring bowel resection

[HTML](#) [PDF](#)

Cite this article: Smith A, Bilezikian J, Hope W, Fox S. Laparoscopic mesh repair of strangulated groin hernias requiring bowel resection. *Mini-invasive Surg* 2021;5:34.

<http://dx.doi.org/10.20517/2574-1225.2021.44>

Abstract

No robust data support laparoscopic mesh repair in strangulated groin hernias. This is a retrospective review over 6 years of a single surgeon's experience treating strangulated groin hernias using the laparoscopic trans-abdominal preperitoneal mesh repair with concomitant bowel resection through a periumbilical incision. Nine patients presented with incarceration of 2 inguinal and 7 femoral hernias. The median age was 83 years (IQR 68, 85). One patient was male, all were Caucasian, and 5 were ASA 3-4. The median hospital length of stay was 6 days (IQR 4, 7). There were no known hernia recurrences or mesh infections at 30 days. Laparoscopic repair necessitates mesh placement, and doing so in a clean-contaminated setting is acceptably low risk. Laparoscopy permits better assessment of bowel viability compared to open repair and enables mesh coverage of both the inguinal and femoral spaces.