

Incisional Hernia Repair

Open Retromuscular Approaches



Luciano Tastaldi, MD^{*}, Hemasat Alkhatib, MD

KEYWORDS

- Incisional hernia • Component separation • Rives-Stoppa • Perforator sparing
- TAR • Abdominal wall reconstruction

KEY POINTS

- Incisional hernias are a common complication after abdominal surgery.
- Hernia surgery is constantly evolving; innovations in techniques, materials, and patient management have revolutionized the way hernias are repaired.
- The advent of the Rives Stoppa technique contributed to decreased recurrence and wound complications, providing a well-vascularized space for mesh placement.
- Abdominal wall reconstructive techniques have been successfully implemented into the surgical armamentarium to repair large and complex incisional hernias.
- Complex incisional hernias will increasingly be part of the general surgeon's practice, making imperative a profound knowledge of the abdominal wall anatomy and surgical techniques for hernia repair.

INTRODUCTION

Hernia repair has undergone vast evolution in the last 5 decades. Surgeons have embarked on an incessant search for the “optimal approach” to repair incisional hernias, driven perhaps by their patients' frustration as well as their own when faced with a failed repair after what initially looked like the “perfect surgery.” These efforts have led to remarkable accomplishments in hernia surgery.

With the unacceptable rates of hernia recurrence seen with primary fascial repairs, the first revolution in hernia surgery came with the concept of the tension-free fascial closure with mesh. Soon enough, mesh repair became the gold standard for elective ventral hernia repair. The second revolution came later when, still uncomfortable with persisting high rates of recurrence despite the use of mesh, Drs Rene Stoppa, Jean Rives, and George Wantz explored the retromuscular and preperitoneal planes of the abdominal wall, contributing to significant refinements in surgical techniques. Mesh now could be placed in a space that was well-vascularized and entirely

Disclosure Statement: The authors have nothing to disclose.

Comprehensive Hernia Center, Digestive Disease and Surgery Institute, Cleveland Clinic Foundation, 9500 Euclid Avenue, A10-133, Cleveland, OH 44195, USA

* Corresponding author.

E-mail address: tastall@ccf.org

Surg Clin N Am 98 (2018) 511–535

<https://doi.org/10.1016/j.suc.2018.02.006>

0039-6109/18/© 2018 Elsevier Inc. All rights reserved.

surgical.theclinics.com

excluded from the bowel. This technique, although unknown at that time, was the first true myofascial release, because it involved releasing the rectus muscle from its fascial compartment and provided 5 cm of medial advancement on each side of the abdomen.¹ Although the Rives-Stoppa retromuscular repair has gained popularity and became the global “standard approach” for incisional hernia repairs, it still was not sufficient to adequately fix larger and more complex defects.

Dr Oscar Ramirez was responsible for starting the third revolution in hernia surgery by describing the anatomic components separation of the abdominal wall,² which became what is now known as “abdominal wall reconstruction.” He described the anterior components separation that involved the release of the external oblique muscle and fascia to achieve medial advancement. Subsequent modification of this technique arose, each with its own set of disadvantages. Most recently, a new development in hernia repair was described with initially promising results: the posterior component separation with transversus abdominis release (TAR). This technique allowed for significant myofascial advancement and wide mesh overlap in the sublay position, while preserving blood supply to subcutaneous tissue and skin.

The so-called optimal approach for hernia repair is yet to be defined, and further innovations are still essential to address the quality of life for hernia patients. We aim in this article to summarize the open retromuscular techniques available in the current surgical armamentarium to repair an incisional hernia.

RIVES-STOPPA RETROMUSCULAR REPAIR

Developed by Drs Jean Rives and Rene Stoppa in the 1960s, and later popularized by Dr George Wantz, the Rives-Stoppa retromuscular repair remains the gold standard open approach for incisional hernia repair owing to its superior durability and lower wound complications rates when compared with other open approaches.¹ The principles of placing the mesh in a well-vascularized space favoring mesh incorporation, and in addition completely excluding the prosthesis from intraabdominal contents mitigating mesh-related complications have leveraged the adoption of this technique. In addition, having intraabdominal pressure forcing the prosthesis against the rectus muscle and, thus, supporting mesh incorporation into the abdominal wall was also the biomechanical principle involved in the rationale of this technique to decrease hernia recurrence.¹

A retromuscular hernia repair is primarily based on freeing the rectus muscle from its fascial compartment by releasing the posterior rectus sheath from its dorsal insertion into the linea alba, and sequentially dissecting the muscle off the fascia laterally. This procedure ultimately allows for a medial advancement of the linea alba of up to 5 cm at the level of the umbilicus and 3 cm above and below the umbilicus. Without any further complicated component separation, this simple myofascial release of the rectus muscle should be enough to adequately provide a tension-free fascial closure for defects of maximum 10 cm in width. In addition, the creation of a retrorectus pocket provides adequate space for mesh positioning secluded from intraabdominal contents. By closing the anterior fascia on top of the mesh, the prosthesis is protected from the more superficial layers of the wound, decreasing risk for mesh infection.^{1,3} More important, the Rives-Stoppa retromuscular repair does not require the creation of subcutaneous flaps and, therefore, can help to minimize wound complications and mesh exposure in case of wound breakdown.

Preoperative Planning

During the preoperative visit, the surgeon should conduct a comprehensive clinical evaluation, considering patient and hernia aspects that can influence the outcomes

Download English Version:

<https://daneshyari.com/en/article/8837538>

Download Persian Version:

<https://daneshyari.com/article/8837538>

[Daneshyari.com](https://daneshyari.com)