



## New Approach: Can Laparoscopy Prevent the Emergence of Metachronous Inguinal Hernias?

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### Abstract

The treatment of inguinal hernias by laparoscopy or robotic surgery has become a requirement in the management of inguinal hernias. In view of the benefits of miniminvasive surgery, the laparoscopic approach, in particular the extraperitoneal pathway, allows exploration of the two inguinal orifices. The prevalence of inguinal hernias metachrones contrelaterale is high especially in the hernias acquires over out by weakened, so our approach is to explore systematically the inguinal versus lateral orifice in search of an inguinal hernia subclinical or asymptomatic especially in inguinal hernias due to weakness.

**Keywords:** Hernia; Laparoscopy; Metachrone

### Introduction

Inguinal hernia repair is one of the most common surgical procedures worldwide in general surgery. Each year, approximately 700,000 hernia repairs are performed, resulting in a cost of approximately US \$500,000,000 in the United States, plus drug, sick-leave and stop-work costs. We can say that the twentieth century was, as elsewhere in science and technology, the richest in transformations of hernia surgery. His first half has seen the development of traditional suture techniques; the second half saw the emergence and spread of the prosthetic materials that give better results in the long term. The posterior approach has also been a source of complementary safety and efficacy that laparoscopic video-assisted surgery has recently been appropriate [1-11].

The bilateral hernia has been an underrated topic in herniology and today it continues to be controversial. Since antiquity, it has been reported that patients may have several hernias Hippocrates described the fact that people who ate beans of the genus Lathyrus developed tissue laxity and multiple hernias Cheatle, who performed the repair through a midline incision without entering the abdominal cavity, spreading the peritoneum to expose the two inguinal regions. Later, he described a Pfannenstiel incision, to inspect both sides even in patients with unilateral hernia diagnosed and repair on both sides when a contralateral defect was detected.

The Rives group at Reims and Stoppa at Amiens were aware of the importance of strengthening the posterior wall of the inguinal region because they felt that its weakness to withstand the pressure was a major cause in the development of hernias by Therefore, in the sixties, they began to use a large Dacron. Prosthesis between transversalis fascia and peritoneum, using both the anterior inguinal and preperitoneal approaches.

The concept of tension-free, open or laparoscopic hernia repair, there has been a revolution in hernia repair with the widespread use of prostheses and currently, repair of bilateral hernias in the same surgery is generally accepted. In the early nineties, the inguinal hernia was repaired by laparoscopy surgery has become possible and from the very beginning, the bilateral aspect of the hernia was mentioned as one of the main advantages of laparoscopy because of the possibility to diagnose and treat contralateral defects at the same time [7].

Many reports suggest that laparoscopic repair is ideal for patients with recurrent or bilateral hernias and those requiring some other simultaneous laparoscopic procedure to avoid incision in the groin and on the other hand, to shorten recovery time and decrease postoperative pain [2]. Epidemiology Hernioplasty is one of the most common elective surgeries performed, but it is difficult to know its precise impact due to data collection problems, poor detection and lack of accurate diagnosis. Most patients consult because the hernia is symptomatic or very noticeable, but many are not detected by the patient and they consult because of discomfort or pain in the groin [8]. The true frequency at which bilateral hernias are detected is even less known as shown in the

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clinical picture, which means that operated patients return years later to be repaired on the contralateral side for hernia that was absent, underestimated or not detected at the time of primary surgery.

## Patients and Methods

We operated on 290 patients for laparoscopic inguinal hernia by extra peritoneal total TEP from 2015 to 2019 so one of the advantages of Total Extra Peritoneal repair (TEP) is that the contralateral side can be explored and repaired without the need for further incisions. Our attitude is to explore the contralateral inguinal opening in search of possible infra-clinical contralateral hernia or symptomatic pauci which may go unnoticed even on radiological examination such as ultrasound or with careful clinical examination.

Our management is to systematically explore the contralateral inguinal opening, especially in hernias, our study has revealed on all patients operated by total extra peritoneal TEP, 9 contralateral inguinal hernias were found at a rate of 3.10% on the of all inguinal hernias operated by TEP, out of the nine cases 07 patients underwent direct inguinal hernia by weakness and both cases indirect inguinal hernias, namely that clinically no patient. We proceeded to repair the inguinal contralateral orifice by setting up extra peritoneal prosthesis. By mocking we noticed the occurrence of 03 cases of contralateral hernias in three patients despite a negative exploration of the inguinal contralateral orifice namely that the three patients were operated on for inguinal hernia acquired.

## Discussion

There are few international publications or recommendations that have discussed laparoscopic contralateral exploration for extraperitoneal inguinal hernia in adults, but most publications have been made in children who warrant exploration. Transabdomino preperitoneally TAPP in order to find persistence of the peritoneovaginal canal against the lateral which can be justified by these studies. A study published endoscopic surgery journal in 2016 Long-term incidence of the repair of a contralateral primary hernia after repair of a unilateral inguinal hernia in a cohort of 32,834 patients who for adult patients with primary unilateral repair of hernia, 3364 patients (6.73%) underwent contralateral repair during the follow-up period. After excluding patients with "loss of follow-up", the contralateral repair rate was 10.8%. The first contralateral hernia repairs occurred at an average of  $3.9 \pm 3.5$  years and a median of 2.5 years after the initial surgery [12-17]. The authors concluded that these data point to a key benefit of the laparoscopic versus open repair approach. Based on these data, an argument in favor of laparoscopy with routine contralateral inspection in high-risk patients can be presented. In our experience laparoscopic TEP in the treatment of inguinal hernias found almost a rate of 3.10% of asymptomatic hernias thus allowing an optimal treatment effective two side by setting up two prostheses, this exploration avoids a second general anesthesia and with all the complications of another intervention. Ment to explain three cases of hernias metachrones contralaterale malgres an exploration negative in the first intervention that the three patients were operated on for inguinal hernias [18-20]. Knowledge of the etiology of hernia, the biochemical and immunohistochemical analysis of the rectus sheath and fascia transversalis in adults proves that dysfunction of connective tissue plays a role in the genesis of inguinal hernia. The contemporary concept of hernia biology is responsible for the disturbances of collagen metabolism for high rates of recurrence. However, it remains unclear whether these changes

reflect a basic dysfunction in collagen synthesis or degradation. Collagen matrix malfunctions also explain the high incidence of multiple hernias and the considerable recurrence rates of non-prosthetic techniques. Therefore, the strengthening of the failing wall with alloplastic material becomes imperative, at least for some of the patients with acute hernias, the tissues are sick in concussions, so there is not a place of a prophylactic treatment to avoid this [21]. Emergence of inguinal hernias metachrone versus lateral especially in direct inguinal hernias by laparoscopy especially that the tissues are diseased by collagen matrix dysfunction? For many years, bilateral inguinal hernia in adults was not considered as important only in children. Parents almost always accept the advice of exploring both sides of their children, but most likely they would not accept open bilateral exploration for themselves if not clinically obvious. But as the focus is on detection by physical examination and during the surgical procedure, laparoscopy is more likely to detect contralateral hernia and it also offers an attractive possibility of solving them in the same operation. In Western countries, bilateral repair inguinal hernias account for 10% to 15% of all hernias repaired, although this percentage is higher because with laparoscopy, small asymptomatic preoperative contralateral hernias are found during surgery between 22% and 50%. Postoperative complications such as laparoscopic surgical site infection to explore contralateral vaginal processes have been minimal.

## Conclusion

The treatment of laparoscopic inguinal hernias is a real gain given the constant virtues of this minimally invasive approach, our approach is to explore the contralateral inguinal orifice, the latter has detected the existence of certain contralateral infraclastic hernias what we have allowed to be treated at the same time, especially by the extra peritoneal way.

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