



# International Journal of Surgery Science

E-ISSN: 2616-3470  
P-ISSN: 2616-3462  
© Surgery Science  
www.surgeryscience.com  
2020; 4(1): 86-87  
Received: 19-11-2019  
Accepted: 21-12-2019

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## Stoppas repair for bilateral direct inguinal hernias: Our experience

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**DOI:** <https://doi.org/10.33545/surgery.2020.v4.i1b.316>

### Abstract

**Introduction:** Recent concept in the hernia surgery is to cover the Myopectineal Orifice of Fruchaud, the area of weakness in the abdominal wall from which all groin hernia occur. Rives Stoppa is a technique of giant prosthetic mesh placement to reinforce the bilateral MPO thus preventing hernia.

**Aim:** To study the role of Giant Prosthetic Mesh Placement in the treatment of bilateral direct inguinal hernia.

**Materials and Methods:** Prospective interventional study done in 21 cases of bilateral direct hernias admitted in Narayana Hospital during January 2018 to December 2018. Intra operative and post-operative complications, duration of hospital stay were recorded and analysed.

**Statistics:** Microsoft Excel sheet is used to enter the data. Mean and percentage was used to describe data.

**Results:** All cases were males between 50 -70 years of age. Risk factors were smoking, COPD, BPH, poor abdominal tone. Average duration of surgery was  $55 \pm 5$ min. Post-operative periods were uneventful in all except 1 case who died due to acute on chronic CKD. No recurrences were noted in the 6 months follow-up period.

**Conclusion:** Stoppas repair is effective and safe procedure for bilateral direct hernias.

**Keywords:** Rives stoppas repair, direct hernia, prosthetic mesh

### Introduction

Inguinal hernias are the common condition encountered in general practice. Around 25% of males and 2% of females have inguinal hernias in their lifetimes<sup>[1, 2]</sup>. 75% of all hernias occur in the groin, two thirds of these hernias are indirect and one third are direct. Incisional and ventral hernias account for 10% of all hernias<sup>[3]</sup>.

The anatomical repair of an hernia, including Bassini's and Shouldice's, was abandoned due to the high incidence of recurrence, as they do not address the prevention of recurrence<sup>[4]</sup>.

The current standard surgical management of an inguinal hernia is Lichtenstein's tension-free mesh repair of the posterior wall inguinal canal<sup>[5]</sup>. But still 4% of recurrence and 12% of post-operative chronic pain occur in it<sup>[6]</sup>.

In Rives Stoppas technique the mesh is placed in the preperitoneal space, covering the myopectineal orifice of Fruchaud and separated from the neurological plane, is the ideal location hydrostatically and anatomically to prevent the recurrence of the three potential hernia orifices and chronic pain. It is recommended in giant hernias, recurrent and bilateral hernias

### Materials and methods

This was a Prospective interventional study done in 21 cases of bilateral direct hernias admitted in Narayana Hospital, department of general surgery during January 2018 to December 2018.

Patients with bilateral direct hernias without any complications as for Gilbert's classification<sup>[7]</sup> were selected. Patients demographic data, risk factors involved, intra operative time, post-operative complications, short term recurrence in a year follow up were recorded.

The surgical technique comprises the insertion of a mesh in the preperitoneal space through the groin as described by Rives<sup>[8]</sup>. A  $15 \times 15$  cm polypropylene mesh is used with a slit for the passage of the spermatic cord on either side.

Intra operative and post-operative complications, duration of hospital stay were recorded and analysed.

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## Results

**Table 1:** Age at presentation

Age in year	No of cases	percentage
41-50	3	15
51-60	4	20
61-70	9	46
>71	5	24

**Table 2:** Risk factors

Risk factors	No of cases	percentage
Smoking	16	76
Poor abdominal tone	11	52
COPD	4	20
BPH	5	24

Patients underwent operation under spinal anaesthesia. Average operation time was around  $55 \pm 5$  min. There were no major intra operative complications. Post operatively patients were given adequate analgesics and antibiotics for 24hrs. There were no post-operative complications except for urine retention in 2 cases, seroma in 4 cases, Death in a case who is a case of Acute on chronic CKD died of MI in the post-operative day 2. Patients were discharged on an average on 4<sup>th</sup> day. Follow up was done for a period of one year in the outpatient setup. There were no recurrences in the short-term follow-up.

## Discussion

Inguinal region's anatomy is needed for all surgeons who operate inguinal hernias, and this is especially true for the Rives repair technique<sup>[8]</sup>.

Average occurrence of direct inguinal hernias was around 66. 5 years in the present study. Studies done by Rosa fernandiz<sup>[9]</sup>, Mathinnet M<sup>[10]</sup> and Henmat maghsoudi<sup>[11]</sup> showed that mean age of presentation was 52.7, 60, and 60 years respectively.

Most of patients had risk factors for development of hernia most common being smoking, COPD and BPH. Operating time is time gap between incision and last skin suture. This is comparable to other studies. Operating time is much shorter than laparoscopic repair and bilateral Lichtenstein repair done bilaterally. Operating time is not greatly increased even in cases of bilateral hernias and recurrent hernias. No major complications were found in present study. No cases of major bleeding or bladder injury occurred. No conversion to other methods of repair was done.

Post operatively urine retention in 2 cases, seroma in 4 cases, and death in a case who is a case of Acute on chronic CKD died of MI in the post-operative day 2. No cases of mesh infections were reported, no recurrences were reported.

## Conclusion

The advantages of Rieves Stoppas techniques are

1. Allows bilateral approach for via single incision covering all the hernia orifices including inguinal, femoral and obturator hernias
2. Avoids reoperation through defective, scarred and weakened tissues especially in recurrent hernias
3. Complications are minimal as plane of dissection avoids major vascular structures, no dissection of cord structures or dissection or repair of defect
4. Duration of surgery is short even in complex recurrent hernias
5. Recurrence after mesh repair is low, is related to technical factors

6. Complications like testicular atrophy and chronic groin pain are less common.

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