

Retrospective Evaluation of Patients Undergoing Hernia Surgery: An Observational Study.

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ABSTRACT

Background: Research on the results of hernia surgery has focused mainly on recurrences. However, with the introduction of mesh techniques and presumably an increased awareness of the importance of systematic quality control, the recurrence rate has decreased dramatically. Hence, we planned the present study to retrospectively evaluate the patients undergoing hernia surgery. **Methods:** The study included 50 cases of inguinal hernia admitted to the department. A thorough check up to confirm diagnosis was done and patients were advised total extra peritoneal repair under day care anesthesia setting. The surgery was performed successfully by experienced surgeons. Perioperative complications were managed properly and noted for further evaluation. Postoperatively pain was scored using Visual Analogue (VAS) Scale by the patients. Postoperative complications observed were managed properly and noted for further evaluation. The statistical analysis of the data was done using SPSS version 20.0 for windows. **Results:** A total of 50 patients were included in the study. We observed that bleeding was seen in 2 patients and spermatic cord injury was seen in 1 patient. 46 patients underwent surgery without any complication. The results were statistically non-significant. **Conclusion:** Occurrence of complications is quiet uncommon in patients undergoing hernia surgeries.

Keywords: Hernia, Repair, Surgery

INTRODUCTION

A hernia is an outpouching of the parietal peritoneum through a preformed or secondarily established hiatus. If the hernia extends beyond the abdominal cavity and is thus visible on the surface of the body, it is defined as an external hernia. If the outpouching is limited to peritoneal pockets, it is known as an internal hernia. An intermediate position is taken by the interparietal hernias of the abdominal wall. Hernias may include intra- and retroperitoneal organs, either permanently or intermittently.^[1-3]

Until recently, research on the results of hernia surgery has focused mainly on recurrences. However, with the introduction of mesh techniques and presumably an increased awareness of the importance of systematic quality control, the recurrence rate has decreased dramatically. Hence, now that recurrences are no longer a pressing clinical problem, there has been a recent upsurge in interest in chronic pain as an adverse outcome.^[4-6]

Traditionally almost all inguinal hernias are referred for surgical treatment following diagnosis.

Progression of a hernia by time is natural and most surgeons prefer repairing all inguinal hernias as soon as possible. Inguinal hernia is a benign disease and it repair results in only rare and minor complications in elective setting. Nevertheless complications developed after emergency repairs may be more dramatic and frequent, even mortality may be recorded. It is especially so if patient is elder. Therefore a repair in elective setting is recommended generally.^[7-9] Hence, we planned the present study to retrospectively evaluate the patients undergoing hernia surgery.

MATERIALS AND METHODS

The study was conducted in the Department of General Surgery, M.G. Hospital, Bhilwara, Rajasthan, India. The ethical approval for the study was obtained from ethical committee of the college prior to commencing the study.

We selected 50 cases of inguinal hernia admitted to the department. An informed written consent was obtained from each patient and procedure and advantages of the study were explained to them. Patients with uncomplicated direct/ indirect inguinal hernia and admitted with ASA I, II, III status were included in the study. Complicated cases and patients with history of laparoscopic herniorrhaphy and history of pelvic node resection were excluded from the study. A thorough check up to confirm

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diagnosis was done and patients were advised total extra peritoneal repair under day care anesthesia setting. The surgery was performed successfully by experienced surgeons. Perioperative complications were managed properly and noted for further evaluation. Postoperatively pain was scored using Visual Analogue (VAS) Scale by the patients. Postoperative complications observed were managed properly and noted for further evaluation. The statistical analysis of the data was done using SPSS version 20.0 for windows. The Student's t-test and Chi-square test were used to check the significance of the data. The p-value less than 0.05 was predetermined as statistically significant.

RESULTS

A total of 50 patients were included in the study. [Table 1] shows demographic data of the patients. The mean age of the patients was 42.33 years. Number of male patients was 29. Mean BMI of the subjects was 31.12 kg/m². [Table 2] shows perioperative complications seen in the group. We observed that bleeding was seen in 2 patients and spermatic cord injury was seen in 1 patient. 46 patients underwent surgery without any complication. The results were statistically non-significant ($p > 0.05$) [Figure 1].

Table 1: Demographic data of the patients

Parameters	Study group
Number of patients	50
Mean age (years)	42.33
Number of male patients	29
Mean BMI (kg/m ²)	31.12

Table 2: Perioperative complications seen in the group

Perioperative complications	No. of patients	p-value
Bleeding	2	0.12
Bowel injury	0	
Bladder injury	0	
Vascular injury	1	
Spermatic cord injury	1	
Nerve injury	0	
No complication	46	
Total	50	

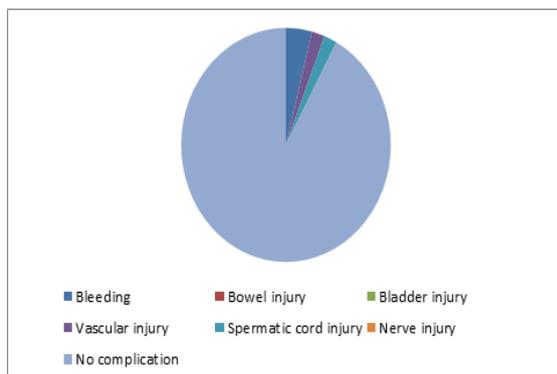


Figure 1: Perioperative complications

DISCUSSION

In the present study, we observed that postoperative complications occurred only in 6 percent of the total study population. Dhumale R et al reduced the waiting time by offering a surgical service from a general practice setting without compromising on quality and safety of patient care. A GPwSI whose special interest was in general surgery started offering a surgical service, including open hernia repair, from a purpose-built operating theatre within general practice premises. Four thousand, nine hundred and sixty-five surgical procedures, including 286 inguinal hernia repairs, were performed. Quality and safety of patient care were not compromised and the waiting time was reduced from 18 months to 4 months. It is feasible to perform open inguinal hernia repairs in a general practice setting.^[10] Lundström KJ et al identified risk factors for postoperative complications and analyze the relative risk of reoperation for recurrence for respective complication. Using data from the nationwide Swedish Hernia Register between 1998 and 2009, 150,514 herniorrhaphies were analyzed with respect to postoperative complications occurring within 30 days of surgery. Risk factors significantly affecting the rate of postoperative complications were laparoscopic repair (odds ratio [OR] 1.35, 95% confidence interval [CI] 1.24-1.47) and open preperitoneal techniques (OR: 1.31, 95% CI: 1.15-1.49), with open anterior mesh as reference category. Other significant risk factors were general (OR: 1.30, 95% CI: 1.23-1.37) and regional anesthesia (OR: 1.53, 95% CI: 1.43-1.63), with local anesthesia as reference category, emergency procedures (OR: 1.53, 95% CI: 1.43-1.63); recurrent hernia repair (OR: 1.39, 95% CI: 1.27-1.52); femoral hernia (OR: 1.30, 95% CI: 1.14-1.48); aged older than 65 years (OR: 1.26, 95% CI: 1.21-1.31); and duration of surgery exceeding 50 minutes (OR: 1.27, 95% CI: 1.22-1.33). Open anterior approach and surgery under local anesthesia are associated with less risk of postoperative complications.^[11] Desarda MP et al described a retrospective study of 200 patients operated on for inguinal hernia under local anaesthesia by the author's technique of inguinal hernia repair. The posterior wall of the inguinal canal was weak and without dynamic movement in all patients. Strong aponeurotic extensions were absent in the posterior wall. The muscle arch movement was lost or diminished in all patients. The movement of the muscle arch improved after it was sutured to the upper border of a strip of the external oblique aponeurosis (EOA). The newly formed posterior wall was kept physiologically dynamic by the additional muscle strength provided by external oblique muscle to the weakened muscles of the muscle arch. A physiologically dynamic and strong posterior inguinal wall and the shielding and compression action of the muscles and aponeuroses

around the inguinal canal are important factors that prevent hernia formation or hernia recurrence after repair.^[12] Peri G et al studied 78 patients affected by inguinal hernia, 33 by direct and 45 by indirect external oblique types. The morphologic and structural aspects of the inguinal canal including its length, the diameter of the deep inguinal ring and the qualitative features of the fascia transversalis and aponeuroses of the external and internal oblique muscles and of the transversus muscle were investigated. In all 78 patients with inguinal hernia, the length of the canal was 4.7 cm. In the 33 patients with direct inguinal hernia the width of the deep inguinal ring varied from 1.5 to 2.5. The aponeurosis of the external oblique muscle was dense in 19 cases (57.58%), rather laddered in 10 (30.30%) and very laddered in 4 (12.12%). The fascia transversalis was discontinued in 28 cases (84.85%) and velamentous in 5 cases (15.15%). In the 45 patients with indirect inguinal hernia the width of the deep inguinal ring varied from 1.5 to 7 cm. The aponeurosis of the external oblique muscle was dense in 14 cases (31.11%), rather laddered in 23 cases (51.11%), very laddered in 8 (17.78%). The fascia transversalis was dense in 15 (33.33%), elastic in 17 (37.78%) and velamentous in 13 cases (28.89%). Based on the results of this study, a series of therapeutic considerations are set forth. The most important of these include early surgical intervention, which is absolutely necessary, and the use of prostheses in the inguinal canal.^[13]

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CONCLUSION

Within the limitations of the study we conclude that Occurrence of complications is quiet uncommon in patients undergoing hernia surgeries.

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