

## TO EVALUATE THE OUTCOME OF OBSTRUCTED INGUINAL HERNIA IN MALE BY DARN REPAIR.

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### ABSTRACT

**BACKGROUND:** Surgery is the sole option to treat strangulated or obstructed inguinal hernia and the option commonly used in our set up is the Darning repair which is the sewing technique to repair the holes of hernia. This technique, introduced by Abrahamson and popularized by Molony, is the tension free and approximates inguinal ligament to conjoint tendon to internal ring and back to pubic tubercle without forcibly bringing tissues together with sutures forming a weave in the posterior wall of the inguinal canal. Studies on daring repair have shown satisfactory results regarding postoperative complications and recurrence. **OBJECTIVE:** To evaluate the results of Darning repair in inguinal obstructed hernia in male patients. **METHODOLOGY:** This is a cross sectional study done in Surgical Unit II of Peoples Medical College Hospital (PMCH) Nawabshah. The duration of study was 1 year from 14<sup>th</sup> August 2019 to 15<sup>th</sup> July 2020. Detailed history and thorough clinical examination of inguino-scrotal region along with examination of abdomen was done. Ultrasound and CT scan wherever required was done. Darn repair was done and observed for outcome. **RESULTS:** Postoperative complications of obstructed inguinal hernia are various. 10 (20%) patients developed wound infection. 3 (6%) had hematoma postoperatively. Recurrence was in 1 (2%) patient. Fecal fistula was noted in 2 (4%) patients. 1(2%) patient expired due to sepsis. 2 (4%) had developed septicemia. In 1(2%) patient chronic groin pain was seen. The overall complication rate was 40%. **CONCLUSION:-**Darning repair in obstructed inguinal hernias is the better techniques as it is cost effective and has least recurrence.

**KEY WORDS:-**Inguinal Hernia, Darning repair, Wound infection, Hematoma, Obstructed.

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### INTRODUCTION

Hernia is simply defined as protrusion of a viscus or a part of viscus through abnormal opening in the wall of its containing cavity. When this abnormality occurs in inguinal region, it is called as inguinal hernia. It is called obstructed when its contents have no compromised blood supply. The incidence of strangulated inguinal hernia varies from 0.3% to 3%. The mortality rate in these cases is 7 times higher as compared to elective ones. The common victims of these conditions are old age patients. The prevalence of this disease in old age patients is 10% and in young age it is only 2%.<sup>1,2</sup>

The pathophysiology of this disease is that indirect hernias follow the same route as is followed by testis during their descent. The

presence of inguinal canal makes patient more vulnerable to develop this disease. The strength of posterior wall of inguinal canal and shutter mechanisms dealing with the increased intra abdominal pressure prevent hernia formation.<sup>3</sup>

Generally, the patient of inguinal hernia develop pain or discomfort during exercise, coughing and symptoms get worsen while walking and relieving while lying down. While standing, the bulge of hernia enhances. Tenderness is noted. Ischemia and gangrene of contents can result haphazard consequences.<sup>4,5</sup>

Clinical diagnosis is made usually but ultrasound is done to see the contents and their viability. Even Computed tomography (CT) scan is also being done. Multiple type of

contents like appendix, small bowel, caecum, omentum, sigmoid colon and even urinary bladder can be part of sac of hernia.<sup>6,7</sup>

Surgery is the sole option to treat strangulated or obstructed inguinal hernia and the option commonly used in our set up is the Darning repair which is the sewing technique to repair the holes of hernia.<sup>8</sup> This technique, introduced by Abrahamson and popularized by Molony, is the tension free and approximates inguinal ligament to conjoint tendon to internal ring and back to pubic tubercle without forcibly bringing tissues together with sutures forming a weave in the posterior wall of the inguinal canal. Studies on darning repair have shown satisfactory results regarding postoperative complications and recurrence.<sup>9</sup>

The rationale of our study is to find out the outcome of darning repair in obstructed inguinal hernia so that the use of darning repair be done in all patients with better results. It is suggested that the awareness be given to patients to come early before complications of the disease occur so that mortality be lessened.

#### MATERIAL METHODS

This is a cross sectional study done in Surgical Unit II of Peoples Medical College Hospital (PMCH) Nawabshah. All the patients were received from Surgical OPD and emergency department. The duration of study was 1 year from 14<sup>th</sup> August 2019 to 15<sup>th</sup> July 2020. After getting permission from ethical committee, data was collected through Performa by Researchers after getting written consent from patients keeping in view the Ethical consideration. Data was entered and analyzed in Statistical package for social sciences (SPSS Version 23.0).

Detailed history and thorough clinical examination of inguino-scrotal region along with examination of abdomen was done. On local examination, redness of obstructed area, tenderness and irreducibility was particularly seen. Ultrasound of region was taken to see the viability of contents. CT scan was done wherever needed. All other systems were also examined. Incarcerated hernias were excluded from the study. Females with hernias were also not the part of study. Irreducible hernia with cirrhosis of liver, inguinal-scrotal trauma and uncontrolled diabetes were excluded from the study. Routine biochemical investigations were done. X ray chest and cardiac opinion were gotten. Anesthesia fitness was obtained and patient was shifted to Operation Theater and was operated accordingly. Wound was closed and patient was shifted to ward for postoperative care. 6 to 9 days hospital stay

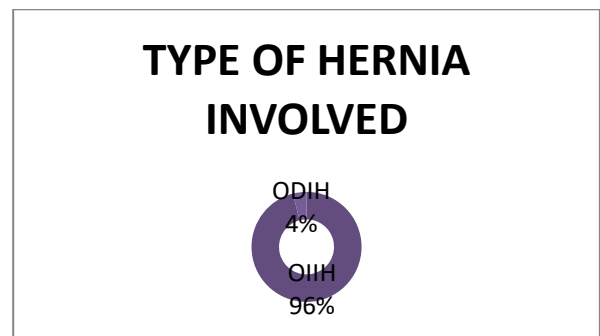
was done by the patients. Follow up period was kept for 6 months to one year to see the late complications of the Darning technique.

#### RESULTS

Total 50 patients were selected for the study that had symptoms of obstructed inguinal hernia. 48 (96%) patients were diagnosed as obstructed indirect inguinal hernia (OIIH) 2 (4%) patients had suffered from obstructed direct inguinal hernia (ODIH). Age difference was also seen among patients in order to see the age group presenting with symptoms of obstructed inguinal hernia. 14 (28%) were aged between 20 to 30 years whereas 15 (30%) were of age from 31 to 45 years. 21 (42%) patients age was 46 to 65 years.

Contents of sac were also different. 20 (40%) patients had omentum as content whereas 22 (44%) patients had ileum, 4 (8%) contained sigmoid in sac and 4(8%) had caecum with appendix.

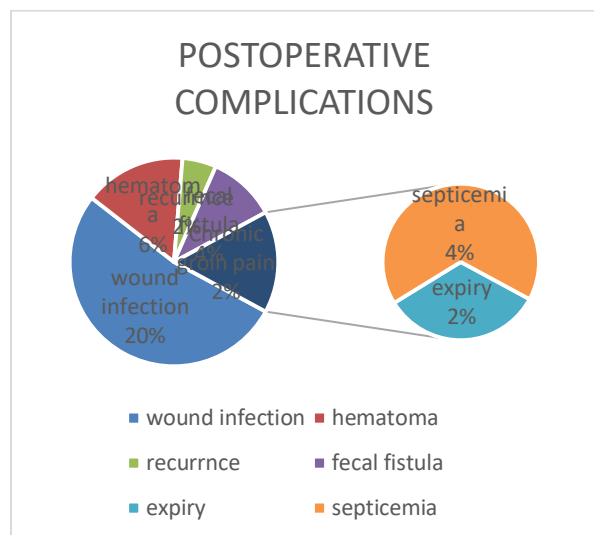
Postoperative complications of obstructed inguinal hernia are various. 10 (20%) patients developed wound infection. 3 (6%) had hematoma postoperatively. Recurrence was in 1 (2%) patient. Fecal fistula was noted in 2 (4%) patients. 1(2%) patient expired due to sepsis. 2 (4%) had developed septicemia. In 1(2%) patient chronic groin pain was seen. The overall complication rate was 40%.



#### AGE OF PATIENTS

S NO	AGE IN YEARS	NO OF PATIENTS	PERCENTAGE
1	20 -30	14	28%
2	31-45	15	30%
3	46-65	21	42%
TOTAL	20-65	n=50	100%

TABLE 2 SAC CONTENTS



## DISCUSSION

Hernioraphy is the most commonly performed procedure in the world. Multiple surgical methods have been introduced in different times but they were being replaced due to more complication rate. In male, inguinal hernia is caused due to impaired collagen metabolism and weakening of fibro connective tissue of the groin. Despite introduction of various methods, still the new methods are being discovered with best results and least complications. Darning repair is still considered to be the better method with minimum complication rate.<sup>10</sup> In a study, the overall complication rate was 40.6%. In our study, the complication rate was 40%. In a study, postoperative wound infection after darning repair in obstructed hernia was 6.2%. In another study, the wound infection rate was 6%. Qazi et al showed postoperative wound infection up to 12%. In a study, the rate of early postoperative wound infection was 29.5%.<sup>11</sup> In our study, the postoperative wound infection was 20%.

Recurrence is the most disturbing complication for hernia patients. In a study done by Molony, the recurrence rate was 0.8%. Same was reported by Abrahamson, Lifschutz and Kingsnorth. The recurrence noted in a study done by Omer farooq was 0.6% but in a study of Mill, no recurrence was

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S NO	CONTENTS OF SAC	NO OF PATIENTS	PERCENT AGE
1	Omentum	20	40%
2	Ileum	22	44%
3	Sigmoid colon	4	8%
4	Ileum and appendix	4	8%
Total		n=50	100%

seen. In our study, the recurrence rate was 2%.<sup>12</sup>

Hematoma is the very dangerous complication and it takes more than 2 weeks to recover in patients of harnioraphy. In some patients, second surgery is needed and wound is explored and multiple dressings are done till the wound becomes ready for secondary suturing. In a study, scrotal hematoma was seen in 6%. But in our study, it was 6%.<sup>13</sup> Chronic groin pain is also seen in many patients undergoing Darn repair for obstructed inguinal hernia. In a study, chronic groin pain was seen in 3% of patients. In our study, it was noted only in 2% of total patients.<sup>14</sup>

## CONCLUSION:-

To sum up, it was concluded that the complication rate of darn repair in emergency inguinal hernia repair is less as compared to other methods.

**ETHICS APPROVAL:** The ERC gave ethical review approval

**CONSENT TO PARTICIPATE:** written and verbal consent was taken from subjects and next of kin

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