



PATIENTS AND SURGEON RELATED VARIABLES FOR RECURRENCE AFTER INGUINAL HERNIA SURGERY: A PROSPECTIVE ANALYSIS.

General Surgery

Dr Vipin Raj*

Assistant professor, Department of General surgery, Autonomous state Medical College Firozabad, Uttar Pradesh, India. *Corresponding Author

Dr Sarina Agarwal

Head -Department of General surgery, Autonomous state Medical College Firozabad, Uttar Pradesh, India.

ABSTRACT

Introduction: Inguinal hernia is still one of the commonest surgical procedures performed worldwide. The exact cause of occurrences still unknown but a lot of predisposing factors like family history, chronic cough; weight lifting, connective tissue disorders etc are depicted. As being the most common procedure performed so are its complications in which recurrence of primary condition leading to re-operation is quite common. So in this study we prospectively studied the various technical and patients related variables in association with recurrence.

Material And Methods: we prospectively included 50 patients over a time period of 1 year, 4 months and correlated various technical and patient associated factors with recurrences.

Result: Our study depicted that out of 6 patients that developed recurrence all of them were above 40 and in them pure tissue repair was done and mesh was not used.

Conclusion: we can say as that routine use of mesh in inguinal hernia surgery has a definite advantage over pure tissue repair and also surgery in older group of patient has higher chances of recurrences as compared to younger population.

KEYWORDS

INTRODUCTION

Inguinal hernia is one the commonest surgical conditions presenting in out-patient department and in emergency. Inguinal hernia is defined as protrusion of abdominal contents into inguinal region with an overlying sac. Anatomically it is divided into direct and indirect inguinal hernia, when the sac emerges from deep inguinal ring its classified into indirect inguinal hernia and when hernia is due to posterior wall weakness its labeled as direct inguinal hernia. With due course of time numerous surgical methods appeared for its correction like bassini's repair, lichenstein tension free mesh hernioplasty, laparoscopic repair methods like TAPP,TEP etc, each of which accounting which its own specific advantages and disadvantages. Complications which could arise post operatively include recurrence, wound infection, neuralgia, and persistent groin pain, mesh migrations etc.

Recurrences rate of inguinal hernia following surgical repair mostly goes undocumented with available data accounting from around 0.5 to 15%.

Recurrences are mostly of two type's early variety with occurs within two years which is mainly due technical and surgeon related factors like faulty techniques, poor surgical sutures etc .Late recurrences are more due to patient related variables like connective tissue disorders, morbid obesity, persistent cough and straining etc.

Inguinal hernia is one of the commonest surgical procedure performed worldwide due to its postoperative complications are also quite frequent. Exact prevalence of burden often goes un-documented So we prospectively studied patient, surgeon and other related variables associated with recurrences of inguinal hernia after definite surgical repair at our centre.

AIMS AND OBJECTIVES:

- 1: To provide surgeon and patients related variables associated with recurrence
- 2: Demographics of patents.

MATERIAL AND METHODS

We prospectively studied data for around 1. Year and 4 months from April 2019 to 1 august 2020 for all patients operated at our centre for inguinal hernia. Place of study- medical college Firozabad, Uttar Pradesh, India. Recurrences in patients were identified by clinical history and examination and were further confirmed by sonographic examination at our centre. Our study was approved by ethical committee of our institution. Detailed Consent taken from all the participants. Total of 50 participants taken in our study. Method of surgical repair is open repair with or without mesh based on surgeon and patient preferences.

Inclusion Criteria

- 1: All patients operated for un-complicated elective inguinal hernia.

Exclusion Criteria:

- 1: Patient denying consent
- 2: Sero-positive positive of HIV and HCV
- 3: Patient lost during study period
- 4: Patient less than 10 years of age

OBSERVATIONS:

Table No: 1 Age Distribution Of Patients:

Serial number	Age group	Number of patients operated	Number of recurrence according to age groups
1	10- 20 years	2	0
2	20-30 years	5	0
3	30-40 years	11	0
4	40-50years	17	1
5	50-60 years	14	3
6	60 and above	1	2

Table No 2: Distribution Of Recurrent Hernia On The Basis Of Side Affected

Serial number	Variables	Values
2	Left side	0
3	Right side	6

Table No 3: Per Operative Primary Findings

Serial number	Per-operative findings	Number recurrence as according to per-operative findings
1	Direct inguinal hernia	33
2	Indirect inguinal hernia	17
3	Pantaloon hernia	0

Table 4: Distribution Of Recurrent Hernia On The Basis Of Period Of Occurrence

Serial number	Time period	Number of patients
1	Early recurrence less than 2 years	5
2	Late recurrences more than 1 years	1

Table No 6: Risk Factors In Recurrence Patients

Serial number	Risk factors	Number of patients
1	Diabetes	1
2	Smoking	0
3	Obesity	3
4	Heavy weight lifting	0
5	Chronic cough	1
6	Constipation	1

Table No 5: Methods Of Repair In All Patients

Serial number	Methods of repair	Number of patients
1	With mesh	33
2	Without mesh	17

Table 7: Recurrences Characteristics On The Basis Of Use Of Mesh

Serial number	Mesh used	Number of patients of recurrence
1	YES	0
2	NO	6

RESULTS AND DISCUSSION:

In our study we found that chances of recurrence hernia is more common in older population group which can be attributed to overall tissue weakness and associated co-morbidity like diabetes etc which leads to connective tissue weakness and leading to poor tissue strength. Similar findings were present in study conducted by Jansen PL et al in which older population groups have higher chances of primary hernia as well as recurrent hernia. We also had right sided recurrences in our patient and also patients in whom per-operative diagnosis was of direct inguinal hernia, in which 6 of them developed recurrences. Similar study conducted by Burcharth J et al also depicted that patient of direct inguinal hernia are more prone to recurrences as compared to indirect inguinal hernia.

Out of 6 recurrences 5 of them presented very early within 1 year. As per the literature available early recurrences are mainly attributed to surgeon expertise, type of suture material used etc. Late recurrences are mainly due to tissue failure and due to persistence of predisposing conditions like persisting cough, chronic constipation, BPH etc.

Out of 50 participant of study 33 patient of inguinal hernia that were operated in them mesh was used to strengthen posterior wall and in 17 of them pure tissue repair was only done. The 6 six patient that later on developed recurrences in them mesh was not used, so we can say as per our study uses of mesh in inguinal hernia surgery has a definite advantage over pure tissue repair.

Our findings correlated with similar findings of EU Hernia Trialists that use of mesh is associated with lower chances of recurrences and lower incidences of post-operative complications so overall better post operative outcome.

Study conducted by Falagas 2005 revealed no differences between the use of mesh versus non mesh relating to post operative complications and recurrence rate.

CONCLUSIONS:

In our study we found that use of mesh has definite advantages over pure tissue repair and is being also associated with lower incidence of post operative complications. Early recurrences which are mainly attributed to surgeon and technical expertise are also mainly in those where repair was done without mesh. Use of mesh gets more important in older subgroup of population in which inguinal hernia is due to posterior wall weakness.

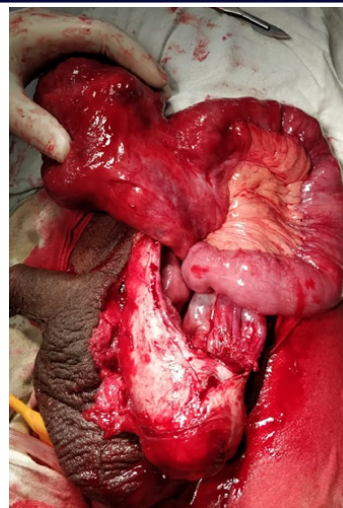
Limitations Of Our Study:

Being a very new institute patient size was less, so a much larger volume study needed to be done to reach out a much precise and definite conclusion

IMAGES



Clinical Photograph 1: Giant Inguinal Hernia



Clinical Photograph 2: Complicated Per Op Picture Showing Bowel Loops And Diverticulum



Clinical Photograph 3: Per Operative Picture Showing Multiple Small Bowel Diverticulum

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