Research Article

Inguinal hernia repair – with and without mesh

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Abstract

This is a review of 470 patients of Inguinal herniae operated at the Indian Institute of Medical Science and Research, Warudi over a period of 3 years. Although Mesh Repair has become Standard in most places, Bassini's repair still has important place in selected patients – young patients with Indirect Hernia, small defect, good muscle and repair without tension. The study shows equally good results of repair without mesh in selected patients.

Keywords: Inguinal Hernia, Repair, Mesh, Bassini.

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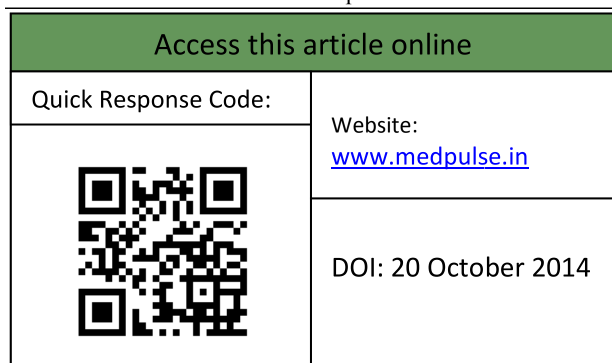

INTRODUCTION

Mesh repair for inguinal hernia has become standard treatment in most of the Institutes and majority of the surgeons irrespective of the type [Direct or Indirect hernia] and the size of the defect but still Bassini's repair has a role in selected patient. Hernia Typology can be determined according to Gilbert's classification as modified by Rutkow and Robbins[1-2] [Table-1]. The use of mesh reduces the rate of recurrence of hernia to less than 1% [3-4]. In adults with Indirect Inguinal hernia, use of mesh prevents formation of Direct hernia later in life[5] but the use of mesh also has certain limitations[6]

1. Mesh is a foreign material and may be rejected by the immune system. This is uncommon.
2. It is associated with risk of infection. Proper Aseptic technique and Prophylactic antibiotic should prevent this.
3. Chronic post-operatve pain. This is a common complaint.

Table 1: Gilbert classification (Modified by Rutkow and Robbins)

Type 1	Internal Inguinal ring is narrow. The hernia sac can be any size.
Type 2	The Internal inguinal ring is moderately wide but not >4 cms.
Type 3	The internal inguinal ring is >4 cms. The Hernia sac also has a scrotal component.
Type 4	Base of inguinal canal is weak.
Type 5	Presence of suprapubic direct diverticular defect
Type 6	Inguinal Hernia has both direct and indirect component.
Type 7	Femoral Hernia

Table 2: No. of Hernia Operation done at IIMSandR

Year	No. of Operation	Pediatric	Adult
2012	84	14	70
2013	112	23	89
2014	274	54	220
Total	**470**	**91**	**379**

PATIENTS AND METHODS

All cases of Inguinal hernia operated at the Indian Institute of Medical Science and Research, Warudi over 3 year period [from 1st January 2012 to 31st December 2014]were reviewed. Their records were checked for age, sex, type of repair and complications. The patients were followed up in the O.P.D. after discharge.

RESULT

In 3 years, 470 cases of Inguinal hernia were operated at the Indian Institute of Medical science and Research, Warudi. 84 patients were operated in 2012, 112 patients in 2013 and274 patients 2014.The age of the patients ranged from 2 to 76 years.[mean age-37 years].91

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patients were in the Paediatric age group and had only Herniotomy [Table-2].There were 4 female, all in the Paeditric age group.379 patients had hernia repair.108 patients had Direct Inguinal hernia. All had Mesh repair.271 patients had Indirect Inguinal hernia.78 had Bassini's repair. They had small defect with good muscle and repaired without tension. Remaining 193 patients had Mesh repair. I.V. Antibiotics [Ceftriaxone and Amikacin] were given for 5days for Mesh repair and 3 days for repair without mesh. There was no recurrence of hernia in our series.6 patients had minor wound infection,2 without mesh and 4 with mesh repair which resolved with Antibiotics and dressing.11 patients with mesh repair keep complaining of pain at the site of operation.

DISCUSSION

The Indian Institute of Medical Science and Research is situated in a rural area 40 kms. from Aurangabad and 25 Kms. from Jalna. It started IN 2010 and Major operations were started in 2011.The number of patients and operations steadily go on increasing. [Table-2] Mesh repair in inguinal hernia has become a standard treatment but some surgeons still prefer to do repair without using mesh to avoid complications due to mesh specially chronic pain at the site of operation. Several studies have shown that the incidence of recurrence of hernia has wide variation ranging from 1.4 percent to 22 percent in whom repair is done without mesh whereas mesh reduces the rate to less than 1 percent[3,4,7]. But mesh has got its own limitations. In one series, re-operation was done for persistant pain after groin hernia mesh repair in 27 percent cases. It was aimed at suspected ilio-inguinal neuralgia. Mesh was remove completely in 28 percent and partly in19 percent. Pubic tubercle stitch was removed in 13 percent. In 62 percent there was decrease in pain, in 19 percent no change and in 19 percent increase in pain[8]. We have been selective in doing the hernia repair in our patients by making certain criteria.

1. Young patient.
2. Indirect Hernia.
3. Small defect.
4. Good muscle tone.
5. Repair without tension.

If the patient satisfies all the above criteria, then repair can be done without mesh. If not, then mesh repair is indicated. There is no significant difference in results between mesh repair and Bassini's repair in our series. The selection of patients is very important for good result. Although the follow-up period is not very long, there have been no cases of recurrence of hernia in this series. The most important single factor in hernia repair with or without mesh is a tension-free repair[2]. According to Gilbert Classification, Type-1, Type-2 and a few selected cases from Type-3 are suitable for repair without mesh. From Economic point of view also, hernia repair without mesh is more beneficial. Apart from the cost of mesh, the use of Antibiotics and hospital stay is less. Nowadays hernia repair with Laparoscopy is becoming popular but it is not available at all places and is expensive. Other alternative methods of repair without mesh like Darn repair and Shouldice repair can also be used.[11]

CONCLUSION

Although Mesh repair for Inguinal hernia has become standard in most of the Institutes and majority of the Surgeons, Bassini's repair has still got a role in selected patients. Certain criteria should be fulfilled for the selection of patients. There was no significant difference in results with or without use of mesh. Repair without mesh is also Cost-effective for Indian patients specially in a rural set-up.

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