



## ORIGINAL RESEARCH PAPER

ENT

### EVALUATION OF SUTURELESS MESH REPAIR OF GROIN HERNIA IN KASHMIRI POPULATION

**KEY WORDS:** Sutureless, mesh hernioplasty, groin hernia

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#### ABSTRACT

**Aim:** To study the sutureless hernia repair with reference to ease of procedure, hospital stay, ambulation, return to work, wound complications and recurrence rate.

**Methods:** This prospective observational study was conducted in the department of General Surgery, Govt. Medical College Srinagar. A total of 100 patients with groin hernia were enrolled in the study and were managed by sutureless hernioplasty using a patch prolene mesh without fixing it to the surrounding ligaments or aponeurotic structures. Several parameters were evaluated in the study including procedure, hospital stay, ambulation, return to work, wound complications and recurrence rate.

**Results:** All the patients were male and majority was in their 4th & 5th decades of life. In majority of the patients groin hernias were left sided (61%) and only 4% had bilateral hernias. Most of patients were ambulatory after 4 hrs of surgery. Post-operative hospital stay was 34.14 hours (Mean). Wound infection was found in 2%, Seroma collection in 6% and wound haematoma in 2% of patients. Recurrence was noted in only one patient.

**Conclusion:** Sutureless mesh hernioplasty is feasible and effective and with low postoperative complication and recurrent rates.

#### INTRODUCTION

Hernia is a protrusion of a viscus or part of a viscus through an abnormal opening in the walls of its containing cavity. In 1958 Usher et al.<sup>1</sup> described hernia repair using marlex mesh. The benefit was that it was a tension eliminating repair. The use of mesh in hernia, however, was not widely accepted for use until Lichtenstein coined the term tension free repair<sup>2</sup>. The goals of successful hernia repair must include achievement of an effective repair, lowest possible recurrence, minimal operative and post-operative discomfort, rapid return to normal activity and cost effectiveness. The tensions free sutureless hernioplasties are especially appropriate for old men<sup>3</sup>. They are usually not needed in woman with primary indirect inguinal hernias as simple obliteration of the deep ring always produce excellent results.<sup>4,5,6,7</sup> Wide spread enthusiasm for tension free hernioplasty has been developed because they are easy to perform.<sup>4</sup> Furthermore suture less hernioplasty with it's added simplicity, durability, quick recovery<sup>3</sup> with comparable results to that of mesh fixation which is the prospect of study. Our study was aimed to see effectiveness and feasibility of sutureless groin hernioplasty in kashmiri population.

#### MATERIAL AND METHODS

This study was conducted at GMC Srinagar which is a tertiary care centre for the surgical patients in the state of Jammu and Kashmir. Study was commenced after taken ethical clearance from the hospital ethical committee. It was a prospective observational study. A total of 100 patients with groin hernia were enrolled in the study and were managed by sutureless hernioplast using a patch prolene mesh without fixing it to the surrounding ligaments or aponeurotic structures. Several parameters were evaluated in the study including procedure, hospital stay, ambulation, return to work, wound complications and recurrence rate

#### OBSERVATIONS AND RESULTS

Demography and other baseline characteristics of study population are shown in table 1. Table 2 depicts Complications and other outcomes of sutureless groin hernia repair

**TABLE 1 Demography and other baseline characteristics of study population**

Attribute		No. (%age); n=100
Gender	Male	100
	Female	0

Age group	< 40 yrs	12
	40 to 60 years	70
	>60 years	18
Laterality	Right	35
	Left	61
	Bilateral	4
Type of hernia	Indirect inguinal hernia	68
	Direct inguinal hernia	32
Presenting complaint	Swelling alone	62
	Swelling with discomfort	38

**TABLE 2 Complications and other outcomes of sutureless groin hernia repair**

Attribute		No. of cases (%age); n=100
Complications	Wound infection	2
	Wound seroma	6
	Wound haematoma	2
	Swelling of Testes	1
	Fixed elevation of testes	1
	Recurrence	1
	Hrs/days	
Mean Ambulation time		5.53hrs
Mean post operative hospital stay		34.14 hrs
Mean time period of return to normal activity		12.22 days

#### DISCUSSION

All the patients were male and majority was in their 4th & 5th decades of life. In majority of the patients groin hernias were left sided (61%) and only 4% had bilateral hernias (Table 1). Most of patients were ambulatory after 4 hrs of surgery. Post-operative hospital stay was 34.14 hours (Mean). Wound infection was found in 2%, Seroma collection in 6% and wound haematoma in 2% of patients. Recurrence was noted in only one patient (table 2).

Presence of groin swelling was chief complaint in majority of cases 62% while pain in the form of dragging/pricking sensation with associated swelling was present in 38% of patients. Majority of the patients were in age group of 41 — 60 years of age. Other researchers have reported similar findings.<sup>8,9</sup> In our study all the 100 patients observed were males as were in a study conducted by Ira. M. Ruthkow et al.<sup>9</sup>

In our study of 100 patient's majority of patients had left side groin hernia (61%). As many as 35% had right sided and just 4% had bilateral hernia. Other researchers have also reported preponderance of left sided hernias.<sup>8,9</sup>

After initial evaluation of the patient they were subjected to repair of the hernia. Our technique was sutureless mesh hernioplasty and the mesh we used was prolene mesh. Patients were made ambulatory from as early as four hours up to 8 hrs with mean period of 5.53 hrs. Zhou J.P. Zhang<sup>10</sup> described a new tension free technique in which the patients were mobilized within 6 hrs after surgery. Post-operative hospital stay was as low as 1 to 2 days with mean of 34.14hrs. Pelissier EP<sup>11</sup> reported in their study a median hospital stay of 1 day while Zhou J.P., Zhang<sup>10</sup> et al reported the hospital stay of 2-3 days.

In our study return to normal activity was 10-15 days with mean period of 12.22 days. A. Hair and K. Duffy<sup>12</sup> in their study of patients return to normal activity was 14 days (7 -28) while EU<sup>13</sup> Hernia Trialists collaboration reported time of return to normal activity 6 days.

In our study wound complications observed during the hospital stay and in the early follow up period were analyzed (table 2). These results were comparable with other studies.<sup>3,7,9</sup> There was only one case of recurrence (1%) which presented early and was due to wrong identification of the sac. Tension free hernioplasty has the greatest advantage of having lower incidence of recurrence. These results were in accordance with other studies<sup>3,9,14</sup>

### Conclusion:

Sutureless mesh hernioplasty is feasible and effective and with low postoperative complication and recurrent rates.

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