IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 20, Issue 1 Ser.2 (January. 2021), PP 01-05
www.iosrjournals.org

"Comparative Study on Inguinodynia in Lichtenstein (Open)Versus Tapp (Laproscopic) Hernioplasty"

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ABSTRACT
AIM:
1.To compare inguinodynia in Lichtenstein (open) and TAPP (laparoscopic hernioplasty)
2.To evaluate the inguinodynia on the basis of visual analogue scale between the two procedures
3.Complications of hernioplasty in open versus laparoscopic and its effect on inguinodynia
METHODOLOGY:
This prospective study comprised of 50 cases of inguinal hernia which were randomly divided into two groups of 25 each named group A and group B. Group A where Lichtenstein hernioplasty was done and group B patients where TAPP (laparoscopic) hernioplasty was done. detailed history and examination done and recorded. Patients were intraoperatively for time taken for surgery and postoperatively for complications.Pain was measured using the pain visual analog scale .Results were based on inguinodynia in Lichtenstein (open) and TAPP (laparoscopic hernioplasty) and Complications of hernioplasty in open versus laparoscopic and its effect on inguinodynia.
RESULTS:
On comparing the both groups of patients, statistically in group B there is a significant lesser post operative pain duration , Thus using visual analogue scale , in group B inguinodynia significantly lesser than in group A , p value < 0.05.P value is less than 0.05 when compared with group A thus incidence of postoperative complications was significantly lesser in group B (TAPP) than in group A (Lichtenstein)
CONCLUSIONS:
Inguinodynia is now considered one of the most important complications after a hernia surgery. Hernia being one of the most common surgical diseases there has been a rise in the incidence of inguinodynia . Thus in my study by comparing grading of pain of inguinodynia , postoperative pain duration, the analgesia dosage, duration of hospital stay and various complications we can come to a conclusion that inguinodynia is significantly lesser in laparoscopy (TAPP) when compared to open (Lichtenstein) hernioplasty.

Date of Submission: 20-12-2020 Date of Acceptance: 03-01-2021

I. Introduction

The meaning of hernia in Greek is bulge or budding and Latin it means rupture or tear. The treatment of hernia has evolved since the beginning of surgical history through different stages through the times of Greek , Romans and Egyptians. As the saying goes the history of hernia surgery is the history of surgery . It is defined as an abnormal protrusion of the part or whole of a viscous through the wall of its containing cavity.

Inguinal hernia repair done electively is one of the most commonly performed surgeries in general surgery. There are many techniques of performing hernioplasty. Post operative pain, patient morbidity, analgesic usage post operative complications and early ambulation of patients are to be considered while selecting a method of performing hernioplasty . Inguinodynia is pain or discomfort after hernioplasty that can last for more than three months . It can present as hypoaesthesia ,neuralgia, paraesthesia,, hyperesthesia limiting physical and social activities . nerve injury during open repairs are very common . Chances of surgical site infection are common in open hernioplasty. These are less common in laparoscopic hernioplasty .Hence by comparing post operative pain, operative time analgesia usage ,post operative complications and patient mobilization we can come to a conclusion that for uncomplicated hernias laparoscopic hernioplasty causes less chances of inguinodynia than open Lichtenstein hernioplasty .

II. Materials And Methods

Aim:
1.To study the operative time in fixing the mesh
2.To compare the postoperative pain and postoperative infection in both groups.

Study design:
Prospective Study

Place of study:
GMKMC hospital

Study period:
December 2017 to September 2019

Study population:
Patients admitted to department of surgery GMKMCH , during study period dec 2017 to sept 2019, satisfying inclusion and exclusion criteria are considered into study.

Inclusion criteria:
Patients with unilateral hernia
Patients with inguinal hernia , not associated with any complications,
Above 20 years of age

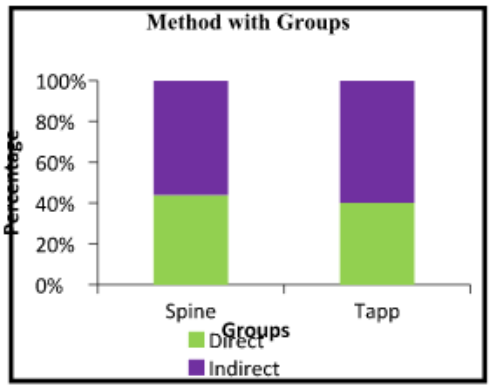
Exclusion criteria:
Patients with preoperative chronic pain problems
Patients with bilateral hernia , femoral hernia
Patients with complicated hernias like – irreducibility , obstruction , strangulation , incarceration
Patients below 20 years
Patients with recurrent hernia
Patients with psychiatry illness , pregnancy , diabetes mellitus
Patient with associated hydrocele
Patient with bleeding disorders and those patients on anticoagulant treatment.

III. Methodology:

Written informed consent was obtained.
Patients who satisfy the inclusion and exclusion criteria were divided into two groups
History, clinical examination and routine investigations
In proforma , history , clinical examination are noted.
Routine investigations like
25 patients in group A underwent open Lichtenstein's hernioplasty
25 patients underwent TAPP (laparoscopic) hernioplasty

IV. Results

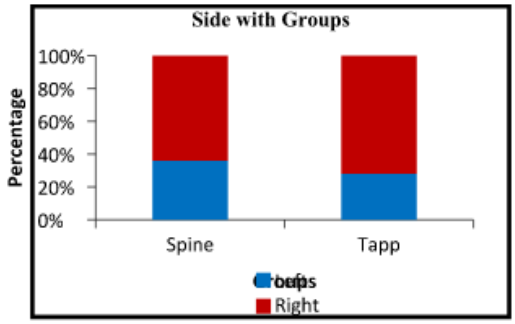
Incidence of direct and indirect hernia:



Comparison between type of hernia with Groups

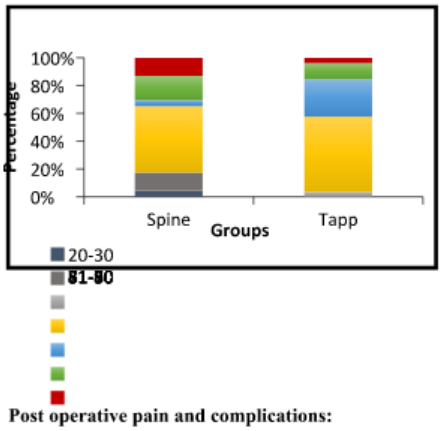
			Groups		Total
			Spinal	TAPP	
METHOD	DIRECT	Count	11	10	21
		%	44.0%	40.0%	42.0%
	INDIRECT	Count	14	15	29
		%	56.0%	60.0%	58.0%
Total		Count	25	25	50
		%	100.0%	100.0%	100.0%

Comparison of left and right hernias:

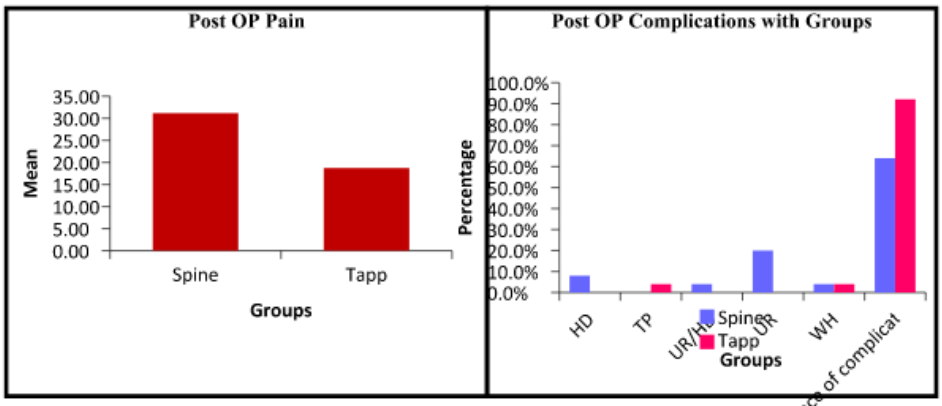


			Groups		Total
			Spinal	TAPP	
SIDE	LEFT	1Count	a	7	16
		%	36.0%	28.0%	32.0%
	RIGHT	Count	16	18	34
		%	64.0%	72.0%	68.0%
Total		Count	25	25	50
		%	100.0%	100.0%	100.0%

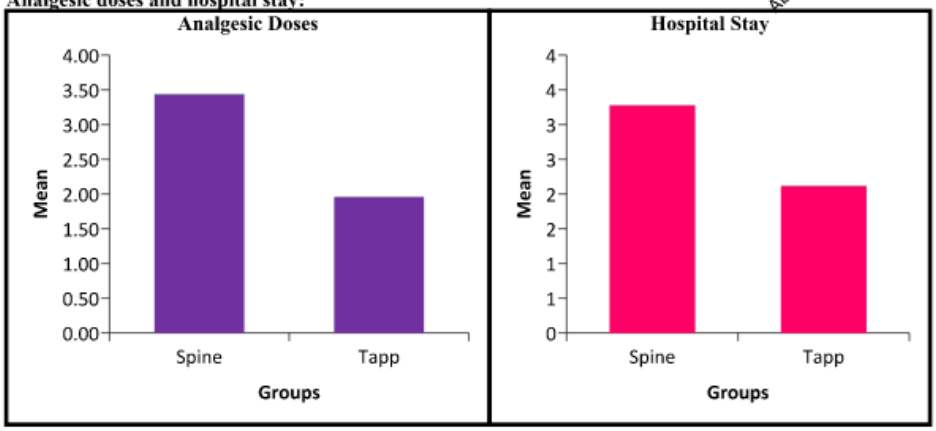
Operative time of hernia in Lichtenstein and TAPP hernioplasty:



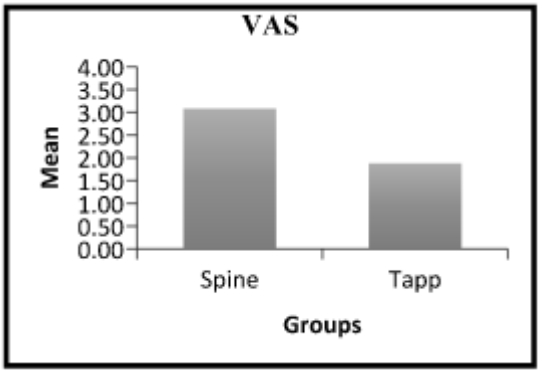
Post operative pain and complications:



Analgesic doses and hospital stay:



Comparison of inguinodynia based on visual analogue scale:



V. Discussion

I have conducted a prospective study on 50 patients having Inguinal Hernia. I have divided them into 2 groups. Group A underwent Lichensteins Open Hernioplasty and Group B underwent TAPP(Laparoscopic) Hernioplasty.

The youngest patient in group A is 22 years old and 24 years old in Group B while the oldest patient is 67 years in Group A and 70 years in Group B with a mean age of 40.44 in Group A and in Group B is 48.28.

The number of Indirect Inguinal Hernia in Group A was 14(56%) and Group B was 15(60%). The number of Direct Inguinal Hernia in Group A is 11(44%) and Group B is 10(40%) , thus indicating statistically that Indirect Inguinal Hernia is more common than Direct Inguinal Hernia. Indirect Inguinal Hernia was found to be more common between 22-40 years of age and Direct Hernia between 40-70 years of age. As per the study, thus Direct Hernias are more commoner in the older age group and Indirect Hernia in younger age group.

The number of Right sided Inguinal Hernia in Group A is 16(64%) and Group B is 18(72%). The number of Left sided Inguinal Hernia in Group A is 9(36%) and Group B is 7(28%). Thus Right sided Inguinal Hernia are more common than Left according to the study.

On the basis of the operating time in Group A, the time taken for hernioplasty was 20-30 minutes for 1 (4%) patient, 31-40 minutes for 3 patients(12%), 41-50 minutes for 2 patients(8%), 51-60 minutes for 11 patients (44%), 61- 70 minutes for 1 patient(4%), 71-80 minutes for 4 patients(16%), 81-90 minutes for 3 patients.

In Group B the time taken for hernioplasty was 51-60 minutes for 14 patients(56%), 61-70 minutes for 7 patients(28%), 71-80 minutes for 3 patients(12%) and 81-90 minutes for 1 patient(4%).

Post operative pain is one of the most common complications due to traction on tissues, tissue handling and infection. They were assessed in both the groups after 12 hours, 24 hours and 48 hours post surgery. In Group A , the incidence of -postoperative pain was more with the mean of 31.20 and in Group B (TAPP) the incidence of postoperative pain was less with a mean of 18.72. The p value was statistically calculated to be 0.006 which indicates that it is highly significant. Hence in our study the persistence of postoperative pain was significantly less in Group B when compared to Group A.

VI. Conclusions

Inguinodynia is now considered one of the most important complications after a hernia surgery. Hernia being one of the most common surgical diseases there has been a rise in the incidence of inguinodynia . Thus in my study by comparing grading of pain of inguinodynia , postoperative pain duration, the analgesia dosage, duration of hospital stay and various complications we can come to a conclusion that inguinodynia is significantly lesser in laparoscopy (TAPP) when compared to open (Lichtenstein) hernioplasty

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Prof Dr.M.Rajasekar M.S, et. al. "Comparative Study on Inguinodynia in Lichtenstein (Open)Versus Tapp (Laproscopic) Hernioplasty." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 20(01), 2021, pp. 01-05.