

Frequency of Groin Pain in Inguinal Hernia Repair By New Extended View Totally Extraperitoneal Technique Without Mesh Fixation

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ABSTRACT

Objective: The objective was to determine the frequency of severity of groin pain after inguinal hernia repair by e-TEP without mesh fixation.

Study Design: Descriptive case study

Place and Duration of Study: This study was conducted at the General Surgical Department of Nishtar Hospital Multan from 15 November, 2015 to 25 October 2016.

Materials and Methods: Total 350 patients of both genders with inguinal hernia with duration of complain >6 months were included in the study. Patients with Recurrent Hernia, Hypertension, DM, Previous intra-peritoneal intervention, ASA grade III and IV were excluded. In this technique we give a 12mm incision on the upper lateral quadrant of abdomen on the same side of hernia or on either side in the bilateral case. We expose the anterior aponeurosis and incise it creating the space over the posterior aponeurosis. Two additional 5-mm ports are created one at umbilicus other midway between this one and pubic tubercle. Thus with the help of scissors we obtained ample space of surgical area. This division was created with the help of laproscope from the lower most trocar, which allow proper dissection of the line of Douglas free from the underline peritoneum.

Results: The age range in our study was from 18-45 years with average age of 34.585 ± 7.61 years and average duration of hernia was 8.450 ± 1.91 months. Baseline pain score 4.680 ± 1.02 , height 1.571 ± 0.11 meter, weight 73.84 ± 13.76 and mean BMI was 28.668 ± 3.11 kg/m². Majority of the patients were from 31-40 years (42.1%). Male were 86.9%. 86.1% patients have right inguinal hernia. No pain was seen in 72.8%, mild pain in 22.4% and severe pain was seen in 4.8% patients.

Conclusion: It was concluded that most patients were asymptomatic after Laproscopic e-TEP. So e-TEP repair with no mesh fixation is safe and feasible for inguinal hernia,

Key Words: Inguinal hernia, e-TEP hernia repair, Groin pain

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INTRODUCTION

Laparoscopic inguinal hernia repair approaches were first used in 1982, Later on different modifications were done. Recently in 2010 DAES J have made a modification of TEP technique to compensate for its primary disadvantage which is limited surgical field. This modification is called e-TEP (enhanced view-totally extraperitoneal) technique which creates ample surgical field being useful in big inguino scrotal hernias, incarcerated hernia, obese patients and in patients with short distance between umbilicus and pubis.¹

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Groin pain is quite common following the inguinal hernia repair and may reduce the quality of life. This groin pain is either "non-neuropathic" (which is due to scar tissue or mechanical pressure) or neuropathic, (which results from nerve injury or nerve compression or by both). A 2012 Cochrane review by Willaert et al, reports this risk of post hernia repair chronic pain from 7.83% to 40.47%.²

Also 2% to 4% chronic pain is serious that affects the patients daily activity.³

Ali SM and his colleagues has reported the frequency of groin pain after inguinal hernia repair by e-TEP without mesh fixation as 21%- mild pain, 2% having moderate and severe pain.⁴

Bignell M et al has reported in another study the frequency of this pain as 15% by e-TEP.⁵

MATERIALS AND METHODS

Total 350 patients of both genders with inguinal hernia duration > 6 months were included in this study. Patients with recurrent hernia, hypertension, DM, previous intra-peritoneal interventions, ASA grade III and grade IV were excluded. This study was conducted in the surgical department of Nishtar Hospital, Multan from November 15, 2015 to October 25, 2016.

RESULTS

Age range of this study was from 18 to 45 years with mean age of 34.585 ± 7.61 years, mean duration of hernia 8.450 ± 1.91 months, Base line pain score 4.680 ± 1.02 , Height 1.571 ± 0.11 meter, weight 73.874 ± 13.76 and mean BMI was $28.668 \pm 3.11 \text{ kg/m}^2$ as shown in table -1. Majority of the patients were from 31-40 years (42.1%) as shown in table-2. Males were 86.9% as shown in table-3. while 68.1% patients belong to right hernia site as shown in table 4. No pain was seen in 72.8% patients, mild pain was seen in 22.4% and severe pain was seen in 4.8% patients as shown in Table-5, 6,7 and Table 8.

Table No.1: Mean $\pm$ SD of patients according to age, duration of hernia, base line pain score, height, weight and BMI n=335

Demographics	Mean $\pm$ SD
Age(years)	34.585 ± 7.61
Duration of hernia(months)	8.450 ± 1.91
Base line pain score	4.680 ± 1.91
Height (m)	1.57 ± 0.11
Weight (kg)	73.87 ± 13.76
BMI (kg/m ²)	28.668 ± 3.11

Table No.2: % age of patients according to age distribution n=335

Age Groups(years)	No. of Patients	%age
<20	22	6.6%
21-30	22	23.3%
31-40	141	42.1%
>40	94	28.1%

Table No.3: %age of patients according to gender n=335

Gender	No. of patients	%age
Male	291	86.9%
Female	44	13.1%

Table No.4: %age of patients according to site of inguinal hernia n=335

Age group (years)	No. of patients	%age
Right	228	68.1%
Left	79	23.6%
Bilateral	28	8.4%

Table No.5: %age of patients according to no pain n=335

No pain	No. of patients	%age
Yes	244	72.8%
No	91	27.2%

Table No.6: %age of patients according to Mild pain n=335

Mild Pain	No. of Patients	%age
Yes	75	22.4%
No	260	77.6%

Table No.7: %age of patients according to Severe Pain n=335

Severe Pain	No. of Patients	%age
Yes	16	4.8%
No	319	95.2%

Table No.8: Stratification of no pain with respect to age groups.

Age (years)	No Pain		P-Value
	Yes	No	
<20	14(63.6%)	8(36.4%)	0.759
21-30	58(74.4%)	20(25.6%)	
31-40	102(72.3%)	39(27.7%)	
>40	70(74.5%)	24(25.5%)	
Total	244(72.8%)	91(27.2%)	

DISCUSSION

In my study no pain was seen in 72.8% patients, Mild pain was 22.4% and severe pain was 4.8%. Chronic disabling pain persistent at and beyond 1 year is thought to be real but rare, which affects 1% patients with hernia repair.⁶

Severe chronic pain after hernia repair is usually due to ischaemia or neuropathy. Ischaemia may be due to repair under tension which causes severe pain. Neuropathic chronic pain is usually by nerve injury during dissection, neuroma formation, entrapment by sutures or by post operative adhesions or inflammation.⁷

It is true that reported incidence of chronic groin pain after hernia repair is increasing in recent years, though the cause of these changes are still unsettled.⁸

The report from the "DANISH HERNIA DATA BASE" group⁹ suggests that incidence of chronic pain 1 year after groin hernia repair is 29% which is unexpectedly high and gain the attention of all surgeons who repair hernias. Only 1-2% have severe pain at rest and 10% have severe pain on moving which is the result of another study.¹⁰

97.5% Patients with severe chronic pain after groin hernia repair failed to return to walk at 3 months.¹¹

CONCLUSION

It was concluded that the majority of patients were asymptomatic after laproscopic E-TAP inguinal hernia repair. So, laproscopic E-TAP repair with no mesh fixation is safe and feasible for inguinal hernias.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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