COMPARATIVE STUDY BETWEEN LIGASURE-ASSISTED HEMORRHOIDECTOMY VERSUS STAPLED HEMORRHOIDECTOMY

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INTRODUCTION

Hemorrhoids are one of the most common anorectal disorders with a reported prevalence of 4.4% up to 36.4% of general population. The peak prevalence occurs between 45 and 65 years of age. Different studies showed that about 5%-10% of patients suffering from hemorrhoids do not respond to conservative treatments, so surgical procedures become the treatment of choice in such cases. The most common conventional surgical treatment are Milligan-Morgan (open) and Fergusons with electro-cautery hemorrhoidectomy (closed).
In an effort to improve surgical outcomes and reduce postoperative complications , new surgical methods were implemented.

AIM OF THE WORK

The aim of the present work was to compare between Ligasure assisted hemorrhoidectomy and stapled hemorrhoidectomy as regarding post operative pain, bleeding and hospital stay.

PATIENTS AND METHODS

In this prospective randomized controlled study divided in to two equal groups at the Gastrointestinal surgery unit of the Alexandria Main University Hospital between November 1st, 2022, and August 2024, were included. Excluded from the study were patients with Grade 1 hemorrhoids, Grade 2 hemorrhoids, Portal hypertension, Uncontrolled diabetes and Inflammatory bowel disease. Data collection was done using a standardized data collection form to identify the difference between both techniques.

RESULTS

The study included a total of 40 patients. Group (1): 20 patients who underwent Ligasure assisted hemorrhoidectomy. Group (2): 20 patients who underwent stapled hemorrhoidectomy. According to established postoperative care standards in our hospital, all patients received standardized perioperative pain management. The results indicate no statistically significant differences in these parameters of postoperative pain, bleeding, recurrence, anal stenosis and fecal incontinence between Group I and Group II. The results indicate a statistically significant difference in the time of operation between the two groups, with Group II (stapled hemorrhoidectomy) having a longer mean time compared to Group I (ligasure assisted hemorrhoidectomy).

RESULTS

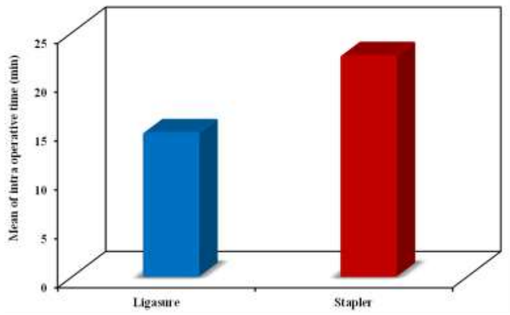

Figure 1: Comparison between the two studied groups according to time of operation

Table 1: Comparison between the two studied groups according to time of operation & intraoperative bleeding.

	Ligasure (n = 20)	Stapler (n = 20)	t	p
Intra operative time (min)				
Min. – Max.	11.0 – 20.0	12.0 – 37.0	5.488*	<0.001*
Mean ± SD.	14.80 ± 2.67	22.70 ± 5.86		
Median (IQR)	15.0(12.50 – 16.50)	23.0 (19.0 – 25.0)		
Intra operative bleeding (ml)				
Min. – Max.	5.0 – 24.0	5.0 – 30.0	0.517	0.608
Mean ± SD.	13.95 ± 4.14	13.10 ± 6.08		
Median (IQR)	12.50 (12.0 – 18.0)	13.0 (10.0 – 16.0)		

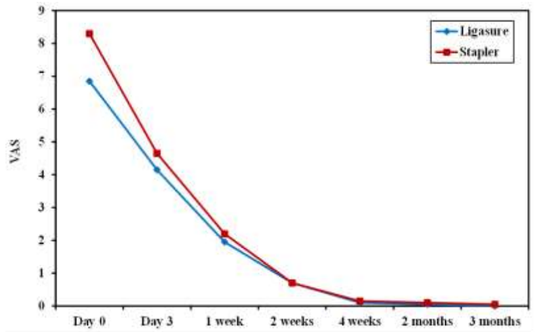

Figure 2: Comparison between the two studied groups according to post-operative pain according to VAS.

Table 2: Comparison between the two studied groups according postoperative pain according to VAS

VAS	Ligasure (n = 20)	Stapler (n = 20)	U	p
Day 0				
Min. – Max.	5.0 – 9.0	6.0 – 10.0	90.000	0.002
Mean ± SD.	6.85 ± 1.09	8.30 ± 1.38		
Median (IQR)	7.0 (6.0 – 8.0)	8.0 (7.0 – 10.0)		
Day 3				
Min. – Max.	2.0 – 7.0	2.0 – 7.0	163.000	0.327
Mean ± SD.	4.15 ± 1.35	4.65 ± 1.53		
Median (IQR)	4.0 (3.0 – 5.0)	5.0 (4.0 – 5.0)		
1 week				
Min. – Max.	0.0 – 4.0	0.0 – 5.0	184.500	0.678
Mean ± SD.	1.95 ± 1.39	2.20 ± 1.47		
Median (IQR)	1.50 (1.0 – 3.0)	2.0 (1.0 – 3.0)		
2 weeks				
Min. – Max.	0.0 – 2.0	0.0 – 2.0	197.000	0.947
Mean ± SD.	0.70 ± 0.86	0.70 ± 0.92		
Median (IQR)	0.0 (0.0 – 1.50)	0.0 (0.0 – 2.0)		
4 weeks				
Min. – Max.	0.0 – 2.0	0.0 – 2.0	190.500	0.799
Mean ± SD.	0.10 ± 0.45	0.15 ± 0.49		
Median (IQR)	0.0 (0.0 – 0.0)	0.0 (0.0 – 0.0)		
2 months				
Min. – Max.	0.0 – 1.0	0.0 – 1.0	190.000	0.799
Mean ± SD.	0.05 ± 0.22	0.10 ± 0.31		
Median (IQR)	0.0 (0.0 – 0.0)	0.0 (0.0 – 0.0)		
3 months				
Min. – Max.	0.0 – 0.0	0.0 – 1.0	190.000	0.799
Mean ± SD.	0.0 ± 0.0	0.05 ± 0.22		
Median (IQR)	0.0 (0.0 – 0.0)	0.0 (0.0 – 0.0)		
Fr (p_0)	112.441* (<0.001*)	112.127* (<0.001*)		

CONCLUSIONS

As there are no discernible differences between ligasure hemorrhoidectomy and stapled hemorrhoidectomy in terms of results except for time of operation, surgeons should choose the option that is available at the lowest cost at their respective institutions.