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Evaluation of Pain Post Stapling and Conventional Hemorrhoidectomy

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Abstract

Background: Hemorrhoids represent one of the most common colorectal complaints heard by family physicians. One fourth of those patients consult a surgeon. One of the most common symptom is anal pain. Hemorrhoids also may thrombose, causing severe pain.

Aim of Study: Comparison of the post-operative pain post open and stapling method.

Patient and Methods: This study was carried out as a Prospective randomized controlled study among 30 patients presented for the Surgical department, unit-25 Cairo University Hospital for surgical treatment of hemorrhoids grade third and fourth. 15 patients doing conventional hemorrhoidectomy and 15 patients doing stapling hemorrhoidectomy. Pain Rating Scale: A linear analogue pain scale from 0 to 10 was used to evaluate pain, where 0 corresponded to no pain and 10 to the worst pain imaginable.

Results: Mean age was 42.07 years in open hemorrhoidectomy group versus 41.4 years in stapled hemorrhoidectomy group with no statistically significant difference. Most of patients in both groups were males.pain score among both groups. It was found that immediately postoperative, mean pain score was 7.4 among open hemorrhoidectomy group patients versus 6.87 among stapled hemorrhoidectomy group patients with no statistically significant difference. When re-evaluated 24 hours postoperative mean pain score was found to be as low as 3.27 among open hemorrhoidectomy group patients versus 3.07 among stapled hemorrhoidectomy group patients but still with no statistically significant difference between both groups. Comparing pain score among paints of each group. It was found that pain score has decreased significantly after 24 hours postoperative compared to immediate postoperative value in both groups with statistically significant difference.

Conclusion: Stapled hemorrhoidectomy has some advantages over conventional hemorrhoidectomy including shorter duration of surgery, shorter duration of hospital stay, faster postoperative return to work, and lower postoperative pain with statistically significant difference.

Key Words: Hemorrhoid – Pain – Open and stapling method.

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Introduction

HEMORRHOIDS represent one of the most common colorectal complaints heard by family physicians. One fourth of those patients consult a surgeon. 'The most common symptom of internal hemorrhoids are bleeding, swelling, irritation of the skin around the anus pain, hemorrhoidal protrusion and mucous discharge **[1].**

Hemorrhoids also may thrombose, causing severe pain **[2].** Worldwide, the prevalence of symptomatic hemorrhoids is estimated at 4.4% in the general population **[3].** External hemorrhoids occur more commonly in young and middle-aged adults than in older adults. The prevalence of hemorrhoids increases with age, with a peak in persons aged 45-65 years **[4].** Prevention is the best treatment for hemorrhoids. The disease once established tends to get worse over time **[5].** Therefore the mainstay of treatment is surgical. There are many method for treating hemorrhoids including Non operative (conservative) options and operative options **[6].**

Operative hemorrhoidectomies are reserved mainly for third- and fourth-degree hemorrhoids. Open hemorrhoidectomy (Milligan-Morgan method) This is the most commonly used technique, but the most common complication are post operative pain, discharge, itching, bleeding and acute urine retention **[7].**

Stapled hemorrhoidectomy also known as circumferential mucosectomy or 'procedure for prolapse and hemorrhoids' (PPH). It was first described in 1998 by Longo for prolapsing second- to fourth-degree hemorrhoids **[8].**

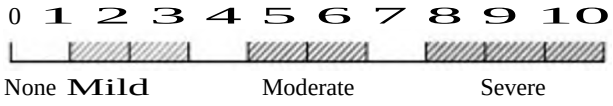
The stapled resection of a complete circular strip of mucosa above the dentate line lifts the hemorrhoidal cushions into the anal canal. In PPH, the prolapsed tissue is pulled into a circular stapler that allows the excess tissue to be removed while the remaining hemorrhoidal tissue is stapled. Patients experience less pain and achieve a quicker return to work compared to conventional procedures; and bleeding is less **[9].**

This study was carried out as a Prospective randomized controlled study Comparing the post operative pain post open and stapling method.

Patients and Methods

The study was carried out in Surgery Department of Cairo University Hospital Unit 25, Colorectal surgery from March 2013 to September 2014.

After obtaining informed consent all patients (minimum age 18 years) who attended the participating clinics for haemorrhoidectomy were considered for inclusion, as grade III or IV. Exclusion criteria include inflammatory bowel disease, previous anorectal surgery, pregnant women and anorectal tumors. All of the studied patients were subjected for Complete medica history, examination for any medical proplem and routine preoperative laboratory investigation. Pain Rating Scale: A linear analogue pain scale from 0 to 10 was used to evaluate pain, where 0 corresponded to no pain and 10 to the worst pain imaginable. A 15 patients doing conventional hemorrhoidectomy and 15 patients doing stapling hemorrhoidectomy.



Linear analogue pain scale from 0 to 10

Results

Table (2) presents pain score among both groups. It was found that immediately postoperative, mean pain score was 7.4 among open hemorrhoidectomy group patients versus 6.87 among stapled hemorrhoidectomy group patients with no statistically significant difference. When re-evaluated 24 hours postoperative mean pain score was found to be as low as 3.27 among open hemorrhoidectomy group patients versus 3.07 among stapled hemorrhoidectomy group patients but still with no statistically significant difference between both groups.

Table (1): Age and sex of the studied patients among both groups.

	Open hemorrhoidectomy (n=15)		Stapled hemorrhoidectomy (n=15)		*p*-value
Age (years)					
25 -	8	53.33%	9	60	0.7 (NS)
45-62	7	46.67%	6	40	
Mean ± SD	42.07±9.9		41.4±12.2		0.8 (NS)
Sex:					
Male	12	80%	11	73.33%	0.7 (NS)
Female	3	20%	4	26.67%	

NS: No statistically significant difference.

Table (2): Postoperative pain score of the studied patients among both groups.

	Open hemorrhoidectomy (n=15)	Stapled hemorrhoidectomy (n=15)	*p*-value
Immediate postoperative pain score:			
Mean ± SD	7.4±1.45	6.87±1.77	0.4 (NS)
Range	4-9	4-9	
Median	8	7	
24 hours postoperative pain score:			
Mean ± SD	3.27±1.71	3.07±1.22	0.7 (NS)
Range	1-7	1-5	
Median	3	3	

NS: No statistically significant difference.

Table (3) presents comparing pain score among paints of each group. It was found that pain score has decreased significantly after 24 hours postoperative compared to immediate postoperative value in both groups with statistically significant difference.

Table (3): Change of pain score from immediately postoperative till 24 hours postoperative among each group.

	Open hemorrhoidectomy (n=15)	Stapled hemorrhoidectomy (n=15)	*p*-value
Immediate postoperative pain score:			
Mean ± SD	7.4±1.45	6.87±1.77	0.001*
Range	4-9	4-9	
Median	8	7	
24 hours postoperative pain score:			
Mean ± SD	3.27±1.71	3.07±1.22	0.001*
Range	1-7	1-5	
Median	3	3	

* Statistically significant difference.

Discussion

Hemorrhoidal disease is one of the most common anorectal disorders.Worldwide, the prevalence of symptomatic hemorrhoids is estimated at 4.4% in the general population **[10,11].**

Conventional hemorrhoidectomy (CH) in volve sexcision of the hemorrhoidal cushions and is generally advocated for 3rd and 4th degree hemorrhoids.

This traditional approach is effective, however it is sometimes accompanied by a high incidence of complications like urinary retention, hemorrhage, and significant pain.

The treatment of hemorrhoids with a circular stapler was first described by Longo at (1998) and by that time it shows some advantages when compared with the conventional technique. This technique is faster and easier to perform, causes less postoperative bleeding and pain, and is associated with a shorter hospital stay and earlier return to work ***[12]***.

Characteristics including internal sphincter and externals phincter thickness and Wexner conteninces score and pain score.

The present study was comparing pain score among paints of each group. It was found that pain score has decreased significantly after 24 hours postoperative compared to immediate postoperative value in both groups with statistically significant difference (*p*: 0.001).

Randomized study comparing stapled hemorrhoidectomy with conventional haemorroidectomy have shown it to be less painful and that it is associated with quicker recovery. The reports also suggest a better patient acceptance and a higher compliance with day-case procedures potentially making it more economical. In studies with short-term follow-up, stapled hemorrhoidectomy appears to be equally efficient in controlling the hemorrhoidal symptoms. Further more, the nature and incidence of the general complications after stapled hemorrhoidopexy seems to be similar when compared to convention alexcisional surgery ***[13]***.

Altomare at ***[14]*** have reported that smooth muscle fibers found in the resected specimens were not related to long-term sever pain or incontinence. They also investigated internal anal sphincter function in the long term with anorectal manometry and rectoanal inhibitory reflex testing, concluded that CSH does not affect the function of the internal anal sphincter. However many reports have indicated that internal sphincter injury may occur while stretching the anal canal during insertion of a 33mm stapler or when firing the stapler.

Boccasanta at ***[15]*** have shown that stapled hemorrhoidectomy has some advantages over conventional hemorrhoidectomy including shorter duration of surgery, shorter duration of hospital stay, faster postoperative return to work, and lower postoperative pain with statistically significant difference. However, the same study has shown that both procedures are safe easy to perform, and effective in the treatment of advanced hemorrhoids with external mucosal prolapse.

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تقييم الألام مابعد عملية استئصال البواسير الشرجيه باستخدام الباسه والطريقه العاديه

تمثل البواسير واحدة من أكثر شكاوى القولون والمستقيم شيوعًا التى يسمعها أطباء الأسرة. ربع هؤلاء المرضى يتم اجراء جراحه لهم. أحد الأعراض الأكثر شيوعًا هو ألم الشرج. قد تتخثر البواسير أيضًا، مما يسبب ألمًا شديدًا.

الهدف من الدراسه: مقارنة الألم بين طريقة استئصال البواسير بالطريقه الجراحية العاديه والتدبيس. أجريت الدراسة على ٣٠ مريضاً بقسم الجراحة بالوحدة ٢٥ بمستشفى جامعة القاهرة للعلاج الجراحى للبواسير من الدرجة الثالثة والرابعة. ١٥ مريضًا تم عمل استئصال البواسير بالطريقه الجراحيه العاديه و١٥ مريضًا باستخام الدباسه. تم استخدام مقياس الألم التناظرى الخطى من٠ إلى ١٠ لتقييم الألم، حيث يتوافق٠ مع عدم وجود ألم و١٠مع أسوأ ألم يمكن تخيله. كان متوسط العمر ٤٢,٠٧ سنة فى مجموعة استئصال البواسير بالطريقه العاديه مقابل ٤١,٤ سنة فى مجموعة استئصال البواسير بالدباسه مع عدم وجود فروق ذات دلالة إحصائية. وكان معظم المرضى فى كلا المجموعتين من الذكور. وقد وجد أن متوسط درجة الألم بعد العملية الجراحية مباشرة كان ٧,٤ بين مرضى مجموعة استئصال البواسير بالطريقه العاديه مقابل ٦,٨٧ بين مرضى مجموعة استئصال البواسير بالدباسه مع عدم وجود فروق ذات دلالة إحصائية. عند إعادة التقييم بعد ٢٤ ساعة من العملية الجراحية، وجد أن متوسط درجة الألم كانت منخفضة تصل إلى ٣,٢٧ بين مرضى مجموعة استئصال البواسير بالطريقه العاديه مقابل ٣,٠٧ بين مرضى مجموعة استئصال البواسير بالدباسه. تتميز عملية استئصال البواسير بالتدبيس ببعض المزايا مقارنة باستئصال البواسير التقليدية، بما فى ذلك مدة الجراحة أقصر، ومدة الإقامة فى المستشفى أقصر، وعودة أسرع إلى العمل بعد العملية الجراحية، وانخفاض الألم بعد العملية الجراحية مع وجود فروق ذات دلالة إحصائية.