

Randomized trial of open versus sutured haemorrhoidectomy in Mulago Hospital in Kampala - Uganda.

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Background: The aim of this study was to compare the early outcome of the conventional open with that of the sutured haemorrhoidectomy.

Method: Forty patients with symptomatic stage III and IV haemorrhoids were randomized to either conventional open haemorrhoidectomy (n=20) or sutured haemorrhoidectomy (n=20). All operations were performed under general anesthesia. Operative time, postoperative pain, duration taken to return to work, postoperative complications, wound healing rate and patient's satisfaction were recorded. Follow-up was weekly for four weeks.

Results: Open haemorrhoidectomy was easier and quicker to perform than sutured haemorrhoidectomy (p-value 0.000). There was no statistically significant difference in the average post-operative pain scores (P-value = 0.054). No difference in the need for extra analgesia was observed. The sutured haemorrhoidectomy resulted in faster rate of wound healing and earlier return to normal activity than open haemorrhoidectomy (p-value 0.027). The overall patient satisfaction score was 1.95 in the sutured group and 1.80 in the open group but this difference was not statistically significant (p-value 0.159). **Conclusion:** Sutured haemorrhoidectomy has a short-term clinical advantage over open haemorrhoidectomy in terms of rate of wound healing and earlier return to work. There was no statistically significant difference in degree of patient satisfaction.

Introduction:

Treatment of haemorrhoids is principally directed at symptoms and not at what the haemorrhoids look like. The old adage, "its hard to make an asymptomatic patient better" applies here. Traditionally conventional open haemorrhoidectomy has been regarded as a notoriously painful operation, and because of this technical modifications to decrease postoperative pain have been tried. Goligher¹ referred to a patient who described a bowel motion following haemorrhoidectomy as being 'like passing bits of broken glass'.

Treatment of haemorrhoids ranges from non-operative or conservative (topical therapy and fibre

supplementation), minimally invasive procedures such as rubber band ligation², cryosurgery, MAD, Doppler ligation³, sclerotherapy, clamp and cauterization and others to operative procedures such as open haemorrhoidectomy, sutured haemorrhoidectomy, stapled and Whitehead haemorrhoidectomy as well as Wannas' operation^{4,5}, and ligasure TM⁶.

The standard sutured haemorrhoidectomy as described by Mitchel⁷ and Earle⁸ removes only the redundant anoderm and haemorrhoidal tissue. The resulting defect is closed with a continuous absorbable suture⁹. Open haemorrhoidectomy as described by Salmon¹⁰ is an excision with high

ligation. Haemorrhoids are the second commonest benign anal condition in Uganda¹¹. In the years 1999 and 2000 an average of 72 patients per year were seen¹².

The present randomized clinical trial was designed to compare sutured haemorrhoidectomy with the conventional open haemorrhoidectomy with regards to the ease and duration of operation, post-operative pain scores and analgesic requirements, rate of wound healing, post-operative complications and patients overall satisfaction.

Patients and Methods

Between October 2001 and March 2002, 40 consecutive patients with stage III or IV haemorrhoids aged above 18 years were enrolled in the study. The protocol was approved by the Surgery Department and Faculty of Medicine Research and Ethical Committees and patients gave written informed consent to be included in the study. Exclusion criteria included concomitant anal disease (fistula, fissure etc), bleeding disorders, clinical AIDS and severe medical diseases. All patients received standardized pre-operative preparation and post-operative management.

Patients were randomly assigned to the open (n=20) or to closed haemorrhoidectomy groups (n=20). The former was performed according to the technique described by Salmon as cited by Watts¹³ and sutured haemorrhoidectomy according to the technique described by Ferguson et al¹⁴. All operations were done under general anaesthesia.

The data collected was entered into a structured questionnaire and analyzed by EPIINFO software. An independent observer measured the duration of operation. Post-operative pain scores and analgesic need, time taken to resume normal working activities, post-operative complications, wound healing and patients overall satisfaction were measured by a blinded research assistant.

Operative details

Both operations aimed at the complete removal of the haemorrhoidal tissue. All patients were operated on in lithotomy position under general anaesthesia and by the same surgeon and same anaesthetist. Half a litre of normal saline was infused during the operation for every patient.

Results

A total of forty patients with stage III and stage IV disease were studied. There were 16 males and 24

females giving a M:F ratio of 1:1.5. The ages ranged from 20 to 72 years with a mean age of 35.9 years (Table 1). Thirty per cent (30%) of the patients were peasant farmers while 22.5% were students. Twenty (50%) belonged to the Ganda tribe.

Open haemorrhoidectomy (OH) was performed with more ease than Sutured haemorrhoidectomy (SH) and it took longer to perform SH than OH (Table 2). Average pain score in the sutured haemorrhoidectomy (SH) group was 2.9 while that of the open haemorrhoidectomy (OH) group was 3.5, as shown in Table 3. On review after the first post-operative week, 5 patients (25%) in the sutured group had partial wound dehiscence while one (5%) had complete wound dehiscence. Those who had partially separated wounds in the first week reported that they had experienced

Difficult defaecation and had severe pain in the first 48 hours after operation.

On the second review, 2 weeks after operation, the wounds in all patients had healed. Only 7 patients (35%) in the open haemorrhoidectomy group had their wounds healed by the 3rd or 4th week after operation (Figure 1).

Four patients in the SH group had urinary retention within the first 24 hours following surgery as compared to 6 cases in the OH group. Two patients in the OH group had mild bleeding from the wounds.

The sutured haemorrhoidectomy patients took an average of 10.6 days before resumption of normal activity while the open haemorrhoidectomy patients took 14.2 days (*p-value* = 0.027). The overall patient satisfaction mean score was 1.95 in the SH group and 1.80 for the OH group (*p-value* = 0.159).

Discussion

Conventional haemorrhoidectomy with excision techniques are accepted as the most effective techniques for prolapsing third and fourth degree haemorrhoids^{15,16}. In our study more females than males presented with symptomatic prolapsed haemorrhoids. This was in contrast with the findings by Dimmer et al¹⁷ who reported more males. OH was performed with more ease than SH and it took longer performing SH than OH. More time was needed in the SH group for the closure of the wound.

The current study has shown no statistically significant difference in average pain scores between the OH and groups (*p-value* 0.054). Watts et al¹³, Ho¹⁸ and Parks¹⁰ reported that the usual cause of pain in operative haemorrhoidectomy is sphincter spasm,

Summary measure	Sutured haemorrhoidectomy (n=20)	Open haemorrhoidectomy (n=20)
Gender: Female	13	11
Male	7	9
Age:		
20-40	15	10
41-60	4	9
61-80	1	1

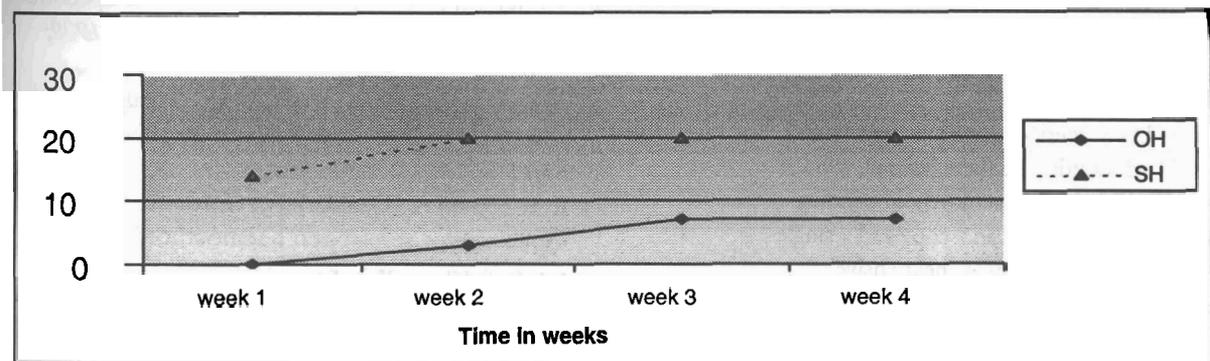
Table 2. Ease and Duration of operation

EASE OF OPERATION	SH	OH	P-VALUE	X ²
Mean +/- s.d	1.85+/- 0.366	1.20+/- 0.410	0.000	16.518
Duration of operation				
Mean +/-sd	14.6+/- 2.85	10.9+/- 1.97	0.000	13.818

Table 3. Post-operative pain and analgesia

	SH	OH	X ²	P-VALUE
Pain score (mean)	2.90	3.50		0.054
Extra analgesia (number)	14 (70%)	10 (50%)	3.622	

Fig 1. Wound assessment: Graph of healing with time



and no anal operation is free from the risk of sphincter spasm. On analyzing pain with patient's satisfaction, it was noted that patients with higher pain scores expressed more dissatisfaction with the management (p -value = 0.028) and also took longer to resume their normal activities. However, patients that underwent SH returned to their normal activities

sooner than those of the OH group (p -value = 0.027).

In our series, only 7 (35%) patients in the open haemorrhoidectomy group had their wounds healed by the 4th week. Anderson¹⁹, Watts et al²⁰ and Neto²¹ had similar findings when they reported complete healing at 6 weeks after OH. In the SH group healing

was occurred in the first two weeks even with patients who had had wound dehiscence. Watts¹⁹ and Khubachandani²¹ reported similar findings.

Khubachandani²² and Milligan²³ reported postoperative bleeding and urinary retention following open haemorrhoidectomy. Two patients in our OH group had some spotting with blood during the first bowel motion that ceased thereafter. Four (20%) and six (30%) patients in the SH and OH groups respectively had urinary retention.

Urinary retention has been attributed to the spasm of the sphincter muscle of the urinary bladder that persists for about 20 hours after operation²⁴, an excess of intra-operative IV fluids and severe post-operative pain. It is also precipitated by the rectal pack or tube or both²¹ and has been reported to be more common in the elderly men with prostatic enlargement¹⁰. Re-assurance, use warm salt baths and continued analgesia managed this.

Conclusions and Recommendations

- OH was easier and quicker to perform.
- OH was associated with post-operative bleeding.
- SH was associated with faster rate of healing and earlier return to work.
- Post-operative pain was not related to the surgical technique used.
- Patients overall satisfaction was related to pain perception.

The following are our recommendations:

- a) SH be employed for the treatment of prolapsed haemorrhoids since it offers better clinical outcome than OH.
- b) Further study to determine long-term outcome of SH in Uganda.

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