Milligan-Morgan Haemorrhoidectomy Versus Stapled Haemorrhoidopexy: A Prospective Comparative Study

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Abstract

Background: Haemorrhoids being a common anorectal problem, characterized by bleeding from anal canal is known for its morbidity and complications. The treatment option depends on the type and severity of the symptoms, on the degree of prolapse and on the expertise of operator and equipment available.

Methods: A prospective study conducted on 30 patients diagnosed with grade 3,4 haemorrhoids attending Department of General Surgery, SCB medical college and hospital from AUGUST 2016 to JULY 2018. After routine investigations the patients were randomly allocated for one the two surgeries after taking an informed consent.

Results: Out of 30 patients 15 underwent stapler haemorrhoidopexy and rest underwent open haemorrhoidectomy. There was a significant difference (p< 0.05) between the two groups in terms of Intraoperative blood loss (63.33±11.16 ml vs 148±32.04 ml), Operative time (27.06±5.26 min vs 52±11.59 min), Hospital stay (1.2±0.77 days vs 2.66 ± 1.17 days), post operative pain and time to return work (3.6±1.298 days vs 9.22±2.67 days).

Conclusions: Stapler hemorrhoidopexy is superior to Milligan-Morgan haemorrhoidectomy in terms of Interooperative blood loss, operating time, hospital stay, Time taken to return to work and patient’s satisfaction and it is straightforward and easy to learn hence it is an alternative to open procedure.

Keywords: Milligan-Morgan Haemorrhoidectomy, Stapler Haemorrhoidopexy, Haemorrhoids, Surgical Procedure.

Introduction

Haemorrhoids, commonly called ‘piles’ are one of the commonest afflictions of mankind from times immemorial. It is said that 40 percent of population have symptoms of haemorrhoids at some time of their lives, a price possibly man has to pay following the evolution of his erect posture. The assumption of an erect posture was a prodigious accomplishment and man pays for his arrogance by the pain and humility that go with
Morgagni (1749) attributed the upright posture of man as the causative factor of haemorrhoids. The term “haemorrhoid” is derived from the Greek adjective “haimorrhoides”, meaning bleeding (haima = blood, rhoos = flowing), and emphasizes the most prominent symptom in the majority of cases. It was first used by Hippocrates in his treatise but it cannot be accurately applied to all the conditions diagnosed as haemorrhoids, for a number of them do not at any time give rise to bleeding. The word Pile is derived from “pila”, a ball. This term was first used by John Ardene and can aptly be used for all forms of haemorrhoids or piles, for literally every such condition does produce a swelling of some kind, even though it may not be seen externally. Vascular cushions within the anal canal do not differ anatomically in normal individuals from those in symptomatic patients. It is therefore probably illogical to talk about the incidence of vascular cushions since they are ubiquitous. In both sexes, all races and all ages have anal cushions. If the cushions are omnipresent then it is only the existence of symptoms that merits classification as a disease. Hundred percent of population has haemorrhoids but only about fifty percent are symptomatic. The treatment of haemorrhoids dates back to antiquity for the two chief symptoms of bleeding and protrusion, the methods of treatment date back to the Babylonian era. Hippocrates described the treatment by cautery, which must have been extremely painful in the ‘pre-anæsthetic era’. This has been mentioned in “Sushruta Samhitā” of the ancient Indian medicine. At present, a wide variety of treatment is available for haemorrhoidal disease, ranging from advice on diet and bowel habit, to a number of non-operative methods of mucosal fixation and widening of the anus, and a host of different techniques of excision of the internal anal vascular cushions and the external vascular channels. The choice of method depends on the type and severity of the symptoms, on the degree of prolapse and on the expertise of the operator and equipments available. Conventional haemorrhoidectomy is a commonly performed operation for haemorrhoids, it has good results but is a very painful procedure resulting in a hospital stay for four to ten days and time off work for two to six weeks. The patient also faces the complications of immediate hemorrhage, reactionary or secondary, urinary retention, and late complications like stenosis or incontinence. In search of a surgical technique to treat this common condition, stapler has been introduced for haemorrhoidectomy. Stapled haemorrhoidopexy has come up as a new and promising procedure causing minimal post-operative pain, early discharge and quick return to work.

Materials and methods
This study was conducted in the Department of General Surgery, SCB Medical College And Hospital, Cuttack, from August 2016 to July 2018 on patients attending the outpatients department or emergency department of SCB Medical College And Hospital irrespective of their gender, background, socio-economic status. In all 30 patients included in the study - 15 underwent stapled and 15 underwent open haemorrhoidectomy. The patients were randomly allocated to one of the two surgeries after taking an informed consent. The advantages and disadvantages of both the procedures were explained to the patient.

Inclusion criteria: All patients of
1. Large grade II haemorrhoids
2. Grade III haemorrhoids
3. Grade IV haemorrhoids
4. Patients fit for anaesthesia were included in the study.

Exclusion criteria
1. Patients having grade I haemorrhoids.
2. Any associated anal pathology like fistula, fissure.
3. Patient with bleeding diathesis.
4. Pregnant ladies.

To assess the general condition of the patient Hb, TLC, DC, urine routine, X-ray chest, blood urea, blood sugar and ECG was done. Following assessment the cases were randomly allocated to one of the two treatment groups.

During the surgery the following parameters were recorded.

1. Operative time.
2. Approximate blood loss during surgery (from the number of gauze pieces soaked with blood).

**Operative procedure** All patients were operated in lithotomy position under saddle anesthesia, in the operation theatre of SCB Medical college and Hospital.

**Open haemorrhoidectomy:**

1. The open technique, which is still widely practiced in the UK, is based on the procedure originally described by Milligan and associates in 1937, and is usually referred to as the Milligan-Morgan operation.

1. The skin covered component of each of the main piles is seized with artery forceps and retracted outwards.
2. The purple anal mucosal component of each pile is grasped in another artery forceps and drawn downwards and outwards. This maneuver prolapses the pile well out of the anus and brings into view the pink rectal mucosa at its upper pole.
3. The traction of the three haemorrhoids is maintained until pink rectal mucosa shows not only at the upper part of the piles but also on the mucosal folds running between the piles. This indicates that the piles have been drawn down to their maximum extent so that the ligatures can be applied at their upper poles rather than in the middle.
4. The operator then makes a V shaped incision in the anal and perianal skin. The limbs of the V cross the mucocutaneous junction but do not extend into the mucosa, the point of the V should lie 2.5-3 cm away from the anal verge.

5. It is preferred to free the haemorrhoidal venous plexus further by dissecting it off the internal sphincter for a distance of 1.5-2.0 cm.

6. The apex of the pedicle is then transfixed with a 0/0 or 1/0 chromic catgut suture on a round-bodied needle. The isolated haemorrhoid is then excised with scissors a few millimeters below the apical ligature, while the transfixion suture remains clamped and left long for further inspection at the end of the operation.

7. The transfixion ligatures are then divided and the skin wounds are trimmed if they appear ragged, leaving three pear-shaped raw areas.

**Stapled haemorrhoidopexy**

**PPH set** (PPH01) consists of

1. 33 mm Ethicon End surgery circular Stapler (HCS33).
2. Circular Anal Dilator (CAD33).
3. Purse-string Suture Anoscope (PSA33).
4. Suture Threader (ST100).

1. The anal verge is held by threeatraumatic forceps at the three points where the prolapse is smaller and the anoderm is slightly averted. The introduction of the CAD 33 causes the reduction of the prolapsed mucous membrane falls into the lumen of the CAD33.
2. The CAD 33 should be affixed to the perineal skin through the four windows of the CAD 33 with silk or linen stitches on a cutting needle, all remaining prolapsing tissues should be pushed back with atraumatic forceps through the windows of the CAD33.
3. The purse string suture anoscope (PSA33) is now introduced through the CAD33. The suture is to be taken at least 4 cm above the dentate line, the distance to be increased in proportion to the degree of the prolapse.
4. The purse string is initiated at 3’O clock position. By rotating the PSA33, it will be possible to complete a purse-string both ends of the suture will be 3’O clock position.
5. The PSA is now introduced to visualize the 9'O clock window and a second simple stitch with the same suture material is placed at 9 0’ clock at the same level as the purse string stitch. This is to ensure equal pull down of mucosa into the hollow stapler housing along its entire circumference.

6. There should be approx. 3 bites in each quadrant of exposed mucosa. The anoscope is rotated clockwise to expose subsequent quadrants. The haemorrhoidal circular stapler (HCS 33) is opened to its maximum position. Its head is lubricated, introduced and positioned proximal to the purse string.

7. With the help of the suture threader (ST 100) both ends of the purse string suture are pulled through the 3-0 clock hole of the HCS33.)

8. Surgeon must ensure correct placement of the mucomucous suture over the anaorectal ring, at least 2 cm from the dentate line. The instrument is then tightened adequately by clockwise rotation till the orange indicator reaches as close as possible to the distal end of the green firing zone. It is then fired.

9. Keeping the HCS 33 in the closed position for 20 seconds before and after firing acts as a tamponade, which promote hemostasis.

10. The stapler is opened completely by anticlockwise rotation of the dial, till it comes out of the anus.

11. After removal of the stapler, the anus should be packed with a gauze piece and light pressure should be applied at the anastomotic site.

12. Finally the staple, line is examined using the PSA33, and additional stitches, if needed should be taken.

**Post-operative care**

Patient was allowed fully oral after 6 hrs of surgery. Then patient was on oral antibiotics. Then patient was advised as follows,

1. Seitz bath (at least thrice a day and after every motion).
2. Syrup Lactitol 3tsf HS for 1 week.

In the postoperative period the parameters recorded were:

3. analgesia required (injectable/oral , non-opiod/opiod )
4. Soakage of the pad with blood
5. Any episode of moderately severe bleeding per rectum
6. Episode of urinary retention
7. Visual analogue score at 24 hours
8. Patient satisfaction

**Visual Analogue score**

The concept of Visual analogue score was explained to each patient in the pre-operative period with the maximum imaginable pain as pain10 and least as 1. The patient was assessed for by VAS at 24 hrs, 3 days, 7 days and 15 days. One each below up visit the patient was subject to visual analogue pain score. On the second and subsequent visit, a gentle digital rectal examination and proctoscopic evaluation was done. Level of patient satisfaction was assessed against a score of 10.

A note on the number of days to return back to work was made. After the initial visits the patients were advised to follow up every 3 monthly upto 1 year to look for:

- Anal stenosis
- Recurrent haemorrhoids
- Anal skin tags or fibrosis
- Incontinence
- Level of satisfaction

The patients who were unable to come for follow up (due to any reason) were inquired telephonically.

**Statistical Tests**

Computerised analysis of the data was done with the help of SPSS SOFTWARE. Significance levels were determined by using averages, standard deviation, unpaired student test, Mann Whitney U test (for non-parametric skewed distribution) and Fischer exact test.
If P value < 0.01 or < 0.001, the difference is highly significant.
If P value < 0.05, the difference is significant.

Results: A total of 30 patients were included in the study.
Group A: Those who underwent stapled haemorrhoidopexy ($n_1=15$)
Group B: Those who underwent open haemorrhoidectomy ($n_2=15$)

Table 1: Age Distribution in Study
Group A: stapled haemorrhoidectomy
Group B: open haemorrhoidectomy

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range (yr)</td>
<td>26-78</td>
<td>26-74</td>
</tr>
<tr>
<td>Mean (yr) ± S.D.</td>
<td>45.8 ± 14.56</td>
<td>52.3 ± 17.08</td>
</tr>
</tbody>
</table>

P value > 0.2694 i.e. > 0.05.

Patient usually had more than one symptom at the time of presentation.

Table 2: Sex Distribution

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Females</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

In the study 25 patients were males and 5 were females.

Table 3: Presenting features

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>N (N=30)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bleeding</td>
<td>25</td>
<td>83.33</td>
</tr>
<tr>
<td>Prolapse</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td>Constipation</td>
<td>22</td>
<td>73.33</td>
</tr>
<tr>
<td>Itching</td>
<td>3</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 4: Degree of Haemorrhoids in patients included in study

<table>
<thead>
<tr>
<th>Grading</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade II</td>
<td>6(20%)</td>
</tr>
<tr>
<td>Grade III</td>
<td>23(76.66%)</td>
</tr>
<tr>
<td>Grade IV</td>
<td>1 (6.66%)</td>
</tr>
</tbody>
</table>

Table 5: Intra-Operative Blood loss

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean (ml) ± S.D</th>
<th>Range (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>63.33 ± 11.16</td>
<td>50-80</td>
</tr>
<tr>
<td>B</td>
<td>148±32.04</td>
<td>80-200</td>
</tr>
</tbody>
</table>

Figure 1: Age distribution of patients in study.

Figure 2: percentage of symptoms.
This was calculated by estimating the number of gauze pieces soaked with blood and multiplying it by 10.
P value < 0.001. Hence the difference in blood loss between the two groups was highly significant.

Table 6: Operative Time

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean (min) ± S.D.</th>
<th>Range (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>27.06±5.26</td>
<td>20-38</td>
</tr>
<tr>
<td>B</td>
<td>52±11.59</td>
<td>40-80</td>
</tr>
</tbody>
</table>

P value : < 0.001. Hence the difference in operative time between the two groups was statistically significant.

Group A (Stapler Haemorrhoidopexy)

Group B (open Haemorrhoidectomy)

Table 7: Hospital stay*

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean (days) ± SD</th>
<th>Range (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.2±0.77</td>
<td>1-4**</td>
</tr>
<tr>
<td>B</td>
<td>2.66±1.17</td>
<td>1-5</td>
</tr>
</tbody>
</table>

*The calculation of the hospital stay was made from the day of surgery and not from the day of admission thus excluding the duration for getting PAC fitness.

**Only one patient in group A had to stay in hospital for 3 days after surgery.

By Mann Whitney U test, P value is 0.000295 i.e. << 0.01

The difference in hospital stay between the two group was statistically significant.

Table 8 : Visual Analogue Scores

<table>
<thead>
<tr>
<th>Day</th>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n1 + n2 + ...</td>
<td>n1 + n2 + ...</td>
</tr>
<tr>
<td>Day 1</td>
<td>51</td>
<td>92</td>
</tr>
<tr>
<td>Day 3</td>
<td>8</td>
<td>59</td>
</tr>
<tr>
<td>Day 7</td>
<td>1</td>
<td>35</td>
</tr>
<tr>
<td>Day 15</td>
<td>0</td>
<td>23</td>
</tr>
</tbody>
</table>

By Mann Whitney U test
P value is

<table>
<thead>
<tr>
<th>Day</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>0.000197</td>
</tr>
<tr>
<td>Day 3</td>
<td>0.000005</td>
</tr>
<tr>
<td>Day 7</td>
<td>0.000005</td>
</tr>
<tr>
<td>Day 15</td>
<td>0.000203</td>
</tr>
</tbody>
</table>

Hence the difference in pain between the two groups is significant even at 2 weeks post-operatively.
Figure 5: Assessment of visual analogue scores

Table 9: No. of patient working in each group before surgery

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>11</td>
<td>73.33</td>
</tr>
<tr>
<td>Group B</td>
<td>9</td>
<td>30</td>
</tr>
</tbody>
</table>

Table 10: Days to return to work

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean (days) ± S.D</th>
<th>Range (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>3.6 ± 1.298</td>
<td>2-7</td>
</tr>
<tr>
<td>B</td>
<td>9.22 ± 2.67</td>
<td>7-15</td>
</tr>
</tbody>
</table>

By Mann Whitney U test,
P value is 0.000003, hence the difference between the days to return to work in the two groups is highly significant.

Group A: Stapled

Group B: Open

Figure 6: Hospital Stay in days

Table 11: Complications

<table>
<thead>
<tr>
<th></th>
<th>Stapled (N=15)</th>
<th></th>
<th>Open (N=15)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary retention</td>
<td>2</td>
<td>13.33</td>
<td>5</td>
<td>33.33</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>1</td>
<td>6.66</td>
<td>1</td>
<td>6.66</td>
</tr>
<tr>
<td>Incontinence</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>6.66</td>
</tr>
<tr>
<td>Increased frequency of defecation</td>
<td>1</td>
<td>6.66</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Anal discharge</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 12: Long Term Sequelae in follow up

<table>
<thead>
<tr>
<th></th>
<th>Stapled (N=15)</th>
<th></th>
<th>Open (N=15)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemorrhoids (recurrent)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Skin tags/fibrosis</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Stenosis</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Maximum follow up of 11 months
Mean follow up of 6.8 months

Table 13: Level of satisfaction – patients’ evaluation

<table>
<thead>
<tr>
<th></th>
<th>Highly Satisfied</th>
<th>Satisfied</th>
<th>Not satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stapled</strong></td>
<td>10 (66.66)</td>
<td>4 (26.66)</td>
<td>1 (6.66)</td>
</tr>
<tr>
<td><strong>Open</strong></td>
<td>3 (20)</td>
<td>7 (46.66)</td>
<td>5 (33.33)</td>
</tr>
</tbody>
</table>

14 of 15 in group A i.e. 93.33% satisfied or highly satisfied
8 of 15 in group B i.e. 53.33% satisfied or highly satisfied

Discussion

Haemorrhoids are one of the most common benign anorectal surgical problems worldwide. Goligher et al. reported that about 40% of haemorrhoid patients have to undergo haemorrhoidectomy at some time or the other. Rubber band ligation, Injection sclerosis, Infra-red coagulation, and cryosurgery have also been used with some success but all have been shown to be inferior to surgery in the management of third and fourth degree haemorrhoids. The criticism directed at haemorrhoidectomy relate to the pain in the post-
operative period, to the necessity for the patient to be admitted in hospital for the operation, and to be absent from work for at least 2 to 3 weeks afterwards with a perineal wound which requires regular dressing. Introduction of stapler for haemorrhoids has eliminated most of the above challenges. It has also made the surgery for haemorrhoids more patient friendly. A total of 30 patients were part of the study excluding the patients who had grade I haemorrhoids or any associated anal pathology e.g. anal fissure or fistula. Mean age in group A was 45.8±14.56 years and in group B was 52.33±17.08 years (Table 1). There was no statistical difference in the mean age group between the two groups. In the study conducted by Hetzer et al, the mean age group was 50.4 yrs in stapled group and 44.8 yrs in open group with no statistical difference. Mean age group was 48 yrs and 47 yrs in the stapled and open groups respectively as evaluated by Ganio et al, Ho and colleagues found the mean age group of 44 years in stapled haemorrhoidopexy patients and 46.3 years in open haemorrhoidectomy patients. The condition of haemorrhoids was more common in males as compared to females (Table 2). Hetzer reported that the sex distribution of male: female was 15:5 in stapled group and 14:6 in open group in his study. This has also been pointed out in other studies in the literature.

Third degree haemorrhoids are the commonest haemorrhoids requiring surgical treatment as reported in various studies. In the present study 23 of 30 patients (76.66%) had grade III haemorrhoids (Table 6). However the condition of fourth degree haemorrhoids was more common in the study conducted by Shalaby et al. The most common complaint of the patients was bleeding (63.33%) (Figure 2). In the study Ortiz 89% of patients presented with bleeding. However Shalaby reported bleeding as a complaint in 65% of patients. Ho et al documented bleeding in 80% of patients. The intra-operative blood loss was significantly less in the stapled group as compared to the open group (mean 63.33±11.16 in group A and 148±32.04 in group B (p <0.001; highly significant) - Table 5.

There was a significant difference in the operative time in the two techniques. In group A mean operative time was 27.06±5.26 min as against 52±11.59 min in group B with a p-value of <0.001; significant - Table 6. It was seen that the duration of surgery showed a downward trend in the stapled group with the increase in the number of cases operated, probably because of the learning curve (Figure). The point of shorter operative time (statistically significant) has been well confirmed by a number of studies. However Ho et al found that the conventional haemorrhoidectomy required less time as compared to the stapled technique. This is probably because the study by Ho et al was conducted between 1999-2000, when the stapled haemorrhoidopexy was still in its earlier stages, learning curve being the contributing factor.

The duration of stay in the hospital was significantly less in group A (mean 1.2±0.77 days) as compared to group B (Mean 2.66±1.17 days) with p value of < 0.01 (Table 7). The hospital stay was shorter in stapled group in the studies conducted by Rowsell et al, Pavlidis et al, Ganio et al and Shalaby et al. However the duration of stay was similar in the two groups as reported by Mehigan et al, Hetzer et al and Ho et al. Visual Analogue Scores at 24 hours, day 3, day 7, day 15 was significantly low in group A as against group B, p
The requirement of analgesics during the hospital stay as well as after discharge was less in group A. The pain scores compared between the two groups in various studies conclusively prove that the post-operative pain is much less after stapled haemorrhoidopexy than after open haemorrhoidectomy. All studies have been unanimous on this point.

The most common complication seen in the study was urinary retention. In group A, 2 of 15 patients had retention of urine while in group B, 5 of 15 patients had urinary retention (Table 13). Shalaby et al\textsuperscript{10} reported urinary retention in 14 out of 100 patients (14%) in open group as compared to 7 out of 100 (7%) in stapled group. Ganio\textsuperscript{16} reports that retention developed in 5 out of 50 (10%) after open haemorrhoidectomy whereas in 3 out of 50 patients (6%) after stapled haemorrhoidopexy. Smith\textsuperscript{21} have noted that urinary retention is the most common problem after haemorrhoidectomy, its degree related to the amount of surgery and the incisions required.

With regard to return to work/routine activities there was a significant difference between the two groups. The range in group A was between 2 to 7 days with mean of 3.62±1.29 days i.e. most of the patients joined back work before 4 days. However in group B it ranged between 7-15 with a mean of 9.22±3.792 days i.e. it took approximately 10 days for patients of group B to return to work. The p value was < 0.01 (Table 10). Most of the studies reported that the return to work or routine activities is much earlier after stapled haemorrhoidopexy in comparison to the open group\textsuperscript{10,12,15,16,19,20}. However Ortiz\textsuperscript{18} et al reported that there was no statistical difference in the meantime to return to work. He said that social and cultural factors need to be taken into account in the assessment of return to work.
par or even expensive in comparison with the stapled technique.\textsuperscript{17}

\textbf{Conclusion}

Hence the stapled procedure for haemorrhoids is superior to Milligan-Morgan haemorrhoidectomy in terms of postoperative pain, operative time and return to normal activity. It is straightforward and easy to learn. Early functional and symptomatic outcomes have been satisfactory and appear similar or better to those achieved using conventional technique. However, long term follow-up with respect to these factors is necessary to testify this procedure.

The next generation surgeons should emulate this new procedure for its implementation in primary and secondary level health care centres, where this facility is available and simultaneously see the affording capacity of the patients too.

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\textbf{Conflict of interest:} None declared

\textbf{Ethical approval :} The study was approved by the institutional ethics committee.

\textbf{References}

1. Goligher JC. In Surgery of the Anus, Rectum and Colon. Haemorrhoids or Piles. 4\textsuperscript{th} Ed. Bailliere Tindall London 1996; Pg 98-149.


8. SeowChoen F. Stapled haemorrhoidectomy: pain or gain Sr J Surg 2001 ;881-3


14. Pernici LM, Bertalucci B, Bencin L et al. Early and late (ten years) experience with circular stapler