Rubber Band Ligation of Hemorrhoids
(Prospective study of 164 case)

Ali Kherala Saad .K. Al Falogi*
Babylon University College of Medicine Dept.of Surgery
*Al- Hila Teaching Hospital, Babylon 

Abstract
In this study we reviewed the management of 164 patients with haemorrhoids underwent rubber band ligation on out patient basis and review of related literatures.

These patients with haemorrhoids underwent rubber banding as out patient. The male patients put in a knee-chest position while female patients were in left lateral position. They were given diclofenac sodium 75 mg . IM. We Applied baron band ligation device.

We treated all hemorrhoids in a single session,(including multiple hemorrhoids).
All cases passed uneventfull postoperative period.
It is a simple procedure; it is done as out patient procedure with minimal complications.

الخلاصة

تم في هذا البحث دراسة 164 حالة مريض مصاب بالبواسير الشرجية بعد معالجتهم بواسطة الحلقات البلاستيكية . و تم مراجعة واستعراض المقالات المنتشرة في نفس الموضوع.

يوضع المريض الذكر في وضع السجود والأنثى في الوضع الجانبي الأيسر. يزرع المريض بجرعة 75 ملم من مادة الفولاتين بالعضلة ثم يتم دخال ناظور الشرج باستخدام جهاز بارتون لوضع الحلقات البلاستيكية.

نتيجة النتائج أن جميع الحالات التي تم علاجها بهذه الطريقة لم تحدث مضاعفات كثيرة، ونستنتج بأن استعمال هذه الطريقة يتم في العيادة الخارجية وهي طريقة سهلة ومضاعفاتها قليلة جدا.
Introduction

It has been estimated in the united state that 58% of people over 40 years of age have hemorrhoids to some extent [1].

Proper treatment of hemorrhoids, reporting of results, comparison of the treatment and description of new methods all require reproducible classification that permits recognition and correct treatment of hemorrhoids of all severity’s, for this reason, the present classification has developed .In it, hemorrhoids are grossly divided into internal and external hemorrhoids, and the internal variety is further sub divided into four stages, based principally on the degree of the prolapse.

First- degree hemorrhoids are pathogenically enlarged but never prolapsed, remaining in their normal anatomical position in the anal canal, they may be asymptomatic, but even when they produce symptom, they can be seen only with proctoscope.

Second –degree hemorrhoids cannot be seen on external examination, but the patient gives history of prolapse with defecation, upon proctoscopy, they bulge prominently, and the site of bleeding is often obvious .

Third –degree hemorrhoids, the prolapse occurs with every bowel motion, occasionally with straining, with exertion specially when standing.

Fourth-degree hemorrhoids are permanently prolapsed and thus prone to thrombosis, they are painful and often bleed profusely, the over lying mucosa often becomes keratinized.

Hemorrhoids are rare below 20 years of age, and they are equally distributed in both sexes.

The symptoms of hemorrhoid disease are similar to those of more serious anorectal pathologies, particularly ,carcinoma and inflammatory bowel disease, so treatment should never be prescribed without a thorough physical examination and endoscopy of at least the rectum.

Rectal pain and /or bleeding[2] are common complaints among the general population. Hemorrhoids are the most common etiology for these complaints. Felling of embarrassment or apprehension about surgery may make patient reluctant to discus anorectal symptom with their physician.
A variety of outpatient methods are available to treat internal hemorrhoids. Rubber band ligation is widely used in the treatment of all degrees of internal hemorrhoids.

**Patients and Methods**


These done on outpatient basis (private clinics). The patients given analgesia (diclofenac sodium (voltarene)) injection, 75 mg intramuscularly. The male patient put in a knee-chest position, while female patients in left lateral position.

Then, the proctoscope introduced to display the hemorrhoids, and through some form of grasping device the hemorrhoids pull into the ligature (gun), when the trigger is pulled the rubber band is forced off onto the base of the hemorrhoids.

The band should be applied at least 2 cm above the dentate line to prevent immediate pain. After seven to ten days, this strangulated tissue sloughs off, leaving an ulcer.

We apply band to two or three hemorrhoids in single session.

**Results**

During this period we treat 164 patient, 128(78%) patient were male and 36(22%) patient were female.

The age range from 20 to 75, most of them at 30 to 50 year old. (Table 1).

These patients are of different degree most of them of 2nd degree 97 patient (59 %), and 3rd degree 55 patients (33.54 %), these patients responded to treatment very well, with minimal complications.

Two patients had bleeding (1.22%), one of them respond to conservative treatment, the other one needs surgical transfixion of the site of bleeding.

The other complications like tolerable pain responding to simple analgesia (NSAID) or local swelling & edema.

Eight patients (4.88%) had urological symptoms like hesitancy and frequency. No patient had pelvic sepsis.

**Discussion**

In our study, we treated 164 patients with hemorrhoids by rubber band ligation. The main indication for these patients was bleeding and prolapse for different degree of Hemorrhoids. This is comparable to study conducted by Worbleski. DE. [3], who reports a through retrospective study of 384
Patient who had undergone rubber band ligation for hemorrhoid disease done by one surgeon, for the period 1988 to 1993, that the principle indication for treatment was rectal bleeding and prolapse. The study shows, eighty-nine percent of these patients improved following treatment.

In this procedure the patients required little analgesia, which is of nonsteroids anti-inflammatory drugs (N.S.A.I.D.), because of little pain, for this reason it is done on outpatient basis.

These results are comparable to the results of Rasmussen et al.[4] who proposed that patient treated by banding required significantly less analgesia and spent fewer days in hospital than those treated by haemorrhoidectomy.

In our results most of patients improved with little complications. Dodi.G, et al.[5] reports that rubber band ligation for 2nd&3rd degree pile is very effective procedure.

Foster, CF, et al.[6] reports that the group who had been treated with rubber band ligation and dilatation with Kamillosan ointment show the best results. These finding are based on comparison of the following criteria (light red hemorrhage, itching, oozing, sensation of incomplete evacuation, nodal prolapsed and slight staining after defecation). This was prospective study carried out in 500 patients with 2nd degree hemorrhoids.

In our study we do ligation of multiple hemorrhoids in one single session without significant complications, And this was comparable to results of study conducted by Lee HH, et al.[8] who conclude that, most of patients tolerated multiple hemorrhoids banding in a single session with acceptably low complications so multiple banding in a single session is a safe and cost effective procedure.

**Conclusion**

Rubber band ligation is:

1-Safe and easy procedure.
2-It could be done to various degree of hemorrhoids.
3-It is associated with acceptable low complications rate.
4-It is out patient procedure, and needs little analgesia.
5-Multiple hemorrhoid ligation in a single session is safe procedure.

**References**


**Table 1** age & sex distribution:

<table>
<thead>
<tr>
<th>Sex</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>16.5%</td>
<td>36</td>
<td>22%</td>
<td>37</td>
<td>22.6%</td>
<td>18</td>
<td>11%</td>
</tr>
<tr>
<td>female</td>
<td>6</td>
<td>3.6%</td>
<td>16</td>
<td>9.8%</td>
<td>5</td>
<td>3%</td>
<td>-</td>
</tr>
<tr>
<td>total</td>
<td>33</td>
<td>21.1%</td>
<td>52</td>
<td>31.7%</td>
<td>42</td>
<td>25.6%</td>
<td>18</td>
</tr>
</tbody>
</table>

**Table 2** Hemorrhoids according to the degree

<table>
<thead>
<tr>
<th>Sex, &amp; degree</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>0</td>
<td>33</td>
<td>15</td>
<td>5</td>
<td>53</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>64</td>
<td>40</td>
<td>7</td>
<td>111</td>
</tr>
<tr>
<td>total</td>
<td>0</td>
<td>97</td>
<td>55</td>
<td>12</td>
<td>164</td>
</tr>
</tbody>
</table>