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The Rubber band ligation of hemorrhoids: effectiveness proves in hemorrhoidal pathology

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ABSTRACT

Hemorrhoidal pathology frequent reason for consultation. The ligature technique has revolutionized its support.We report here the experience of our service concerning this therapeutic method. ***Materials and Methods:*** *This is a prospective and descriptive study over a period of 4 years. We have ligatured outpatient 100 patients with stage 2/3 internal hemorrhoids who are symptomatic or have failed medical treatment.* ***Results:*** *Elastic ligation was performed in 100 patients. The average age was 54, with extremes ranging from 28 to 75 years, with a considerable male predominance (sex ratio H / F 2.9) Subjects with heavy bleeding, deep anemic syndrome and / or> 40 years of age underwent total colonoscopy. 60 of our patients had stage 2 internal hemorrhoids, versus 40 with stage 3 hemorrhoids. The average number of sessions required was 3.5 [2-6]. The average number of rings per session was 2.3 rings (1 - 3). Complications identified were: vagal discomfort in two patients,tolerable and transient pain in 19 patients, minimal rectorrhages in 15 patients. Minimal rectorrhagia was reported in one case on the fifth day of the escarare ligation, and motivated the prescription of anti-haemorrhoidal topicals.No major complications requiring hospitalization.The short-term therapeutic success rate was 89%. With a mean follow-up of 18 months, the recurrence was 11%, 5 received a new instrumental treatment and 4 were proposed for surgery* ***Conclusion:*** *The elastic ligation of hemorrhoids is a simple endoscopic technique practiced by almost all endoscopists, easily achievable and reproducible,*

Keywords : internal hemorrhoid, elastic ligature, colonoscopy

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INTRODUCTION

The pathology haemorrhoidal is a known affection since the high antiquity, occupies a particular place in the medical practice posing problems essentially therapeutic (1).

Treatment involves many methods; medical, surgical and instrumental, the choice of which should be adapted to each patient according to the stage and symptoms of hemorrhoidal disease. Among the instrumental treatments, elastic ligation is particularly indicated for symptomatic internal hemorrhoids, because it makes it possible to treat hemorrhoidal disease without resorting to hospitalization or anesthesia (2).

Elastic ligation (RBL) is the most common non-surgical outpatient procedure available for hemorrhoids. It has been advised to be an outpatient procedure because it is safe, effective and easy to perform (3).

Our work focuses on 100 cases of symptomatic internal hemorrhoids collected and treated by the elastic ligature in the Hepato-gastroenterology department of Mouhamed VI CHU in Marrakech.

Our main goal is to bring back the experience of our service by emphasizing the simplicity and efficiency of elastic hemorrhoid ligation with a review of the international literature.

MATERIALS AND METHODS

This is a prospective and descriptive study over a period of 4 years. We have ligatured outpatient 100 patients, presenting stage 2/3 internal hemorrhoids, symptomatic or in failure of medical treatment, having neither other causes which may explain the symptoms, contraindications to elastic ligation, and having completed the term of the protocol fixed to reach the therapeutic objective. A complete history was taken and age, sex, occupation, residence and presentation (bleeding, prolapse, anal pain, discharge and pruritus) were recorded.

The anal exam was performed by inspection, palpation, P.R. examination, proctoscopic examination and colonoscopy for patients over 45 years of age

All our patients were informed about the indication of the ligature, the course of the technique, the incidents and possible complications.

From the technical point of view, we adopted the classical protocol described in the literature: Patient in genu-pectoral position, no previous preparation. Disposable suction ligator was used through a large caliber anoscope (Figure 1). All our patients received prophylactic antibiotic therapy.

The therapeutic objective was the disappearance of clinical symptomatology after 1 to 4 sessions of ligations spaced 3 to 4 weeks apart.

Statistical analysis of the data was done using SPSS version 11.

RESULTS AND DISCUSSION

Elastic ligation was performed in 100 patients.

The average age was 54, with extremes ranging from 28 to 75 years, with a considerable male predominance (sex ratio H / F 2.9) (Table 1).

Table 1: Demographic Characteristics.

Number	Average age	Age minimal	Age maximum	Sex-ratio
100	54	28	75 years	2,9

The clinical manifestations of internal hemorrhoids are dominated by three main symptoms that are summarized in Table 2.

Table 2: Clinical presentations of patients

symptom	percentage
rectal bleeding	100%
prolapse	40%

Deep anemic syndrome	39%

Subjects with heavy bleeding, deep anemic syndrome and / or age> 40 years underwent total colonoscopy.

60% of our patients had stage 2 internal hemorrhoids, versus 40% with stage 3 hemorrhoids.

The average number of sessions required was 3.5 [2-6]. The average number of rings per session was 2.3 rings (1 - 3) (Table 3).

Table 3: Additional Ligation Intervention

Stadium	Repetition of the ligature
Second degree (n = 60)	39%
Third degree (n = 40)	24%

The short-term therapeutic success rate was 89%. With a mean follow-up of 18 months, recurrence was 11% for patients with stage III hemorrhoids (Table 4).

Table 4: Result of the elastic ligation of hemorrhoids

Evolution	Percentage
Healing	89% (stade II and III)
Recidivism	11 % (Stade III)

We have resumed the protocol of elastic ligation in 5 patients which allowed the disappearance of the symptoms in the 2 patients after sessions of ligature.

We opted for surgery in 4 patients because of the anatomical aggravation of hemorrhoids who passed from stage 3 to stage 4.

Complications identified were: vagal discomfort in 2 patients, tolerable and transient pain in 19 patients, minimal rectorrhages in 15 patients. Minimal rectorrhagia was reported in one case on the fifth day of the escarare ligation, prompting the prescription of anti-haemorrhoidal topicals. No major complication requiring hospitalization (Table 5).

Table 5: post-ligature complications

Complications	Number
vagal discomfort	2
a tolerable pain	19
Minimal rectorrhagia	15
infection	0

Discussion

Hemorrhoidal disease is ubiquitous condition.It is a very common cause of proctology consultation, It affects younger patients according to many studies, 48 years according to Bernal et al. [4] And 47 years according to François et al (5). Which joins our result.

Treatments for hemorrhoidal disease are characterized by their multiplicity and diversity. Several medical, instrumental or surgical therapeutic means. In practice, these means can be associated, and often succeed one another. [6].

The elastic ligation of hemorrhoids is considered the most effective and safest office procedure for all categories of hemorrhoids in terms of short- and long-term results and fewer complications (7).

The ligation of internal hemorrhoids was introduced by Blaisde ll in 1958 and then modified using an elastic band that was popularized as an outpatient procedure by Barron in 1963; the technique remained popular, especially for third-degree and third-party hemorrhoids. Initially, the recommendation was to ligate one hemorrhoid at a time to reduce unacceptable complications, particularly pain and bleeding (8,9).

The optimal number of sessions The optimal number of sessions and the interval time interval between two successive elastic ligature gestures have not been studied specifically but it is usually recommended to move one elastic per session, at a rate of 3 at 4 sessions spaced each 3 or 4 weeks [6].

In Barron's original description, a ligation was performed at each session and repeated at a time interval of three weeks (9). The placement of 2 or 3 elastics per session would reduce the total number of sessions required, but would expose to a higher rate of complications according to some authors (6).

Our series, joined the literature with an average number of sessions that is estimated at 2.3 and an average number of rings per session that varies between 1 and 4. The time interval between two gestures was 3 to 4 weeks.

The elastic ligation is mainly indicated in grade 2 or 3 internal hemorrhoids, it is also effective in grade 1 hemorrhoids but ineffective in grade 4. Its effect is on bleeding as well as prolapse [10].

In our series, 60% of patients had stage 2 internal hemorrhoids and 40% had stage 3.

Ligation success rates range from 79 to 91.8% [11]. In our series, the success rate was comparable to that of the 89% literature.

In Ayman et al. [7], a symptomatic recurrence was detected in 11.04% after 2 years, whereas Vassillios et al. [11] reported 11.9% (53/445) of symptomatic recurrence 2 years after ligation, with repeated ligations or surgery in (41/445) 9.2% of cases.

In our study, symptomatic recurrence was detected in 11% after 18 months of follow-up.

The failure of elastic ligation for stage III haemorrhoids makes the surgery necessary in a small percentage of cases, mainly in those with persistent prolapse and bleeding (12).

In our series, surgery was used in only 4 patients.

One of the greatest disadvantages of elastic ligation is its complications, which are common and poorly tolerated. They are dominated by pain and rectorrhagia (6).

Most of the complications of ligation were minor and did not require hospitalization. Vassillios et al. [11] reported that in 94 patients (18.8%) complications occurred. In our series, ligation complications in 36 patients were minor and no hospitalization was required.

The occurrence of intense immediate pain is the consequence of a ligature placed too close to the sensitive dentine line, and necessitates the removal of the elastic. Another possible cause of the pain, is the feeling of pressure caused by the edema produced by the elastic band or foreign body sensation of the elastic on the rectal mucosa (13).

Between 7 and 15 days after ligation, transient and minimal rectorrhages are present in 1 to 15% of

cases, sometimes important, by pressure ulcer. The occurrence of severe bleeding Severe bleeding severe hemorrhage a few days after ligation is a rare event, reported in 0.2 to 1% of cases, but usually requires transfusions or surgical hemostasis. Other more important but rarer complications (1-5%) are possible (hemorrhoidal thrombosis, internal thrombosed prolapse, dysuria or acute retention of urine, major pain (6).

CONCLUSION

At the end of our study, we demonstrated that elastic ligation is a safe, simple and effective technique, and an outpatient procedure for treating symptomatic second and third degree hemorrhoids with a significant improvement in quality of life.

REFERENCES

[1] Stefan R, Friedrich A, Katrin S, Thomas R, Martina M, Gottfried S, et al. The prevalence of hemorrhoids in adults. Int J Color Dis

[2] Katerina K. Rubber band ligation of hemorrhoids—an office procedure. Ann Gastroenterol. **2003**;16(2):159–161.

[3] Ayman M, Amir A, Waleed H, Elyamani M, Tito A, Hosam E. Rubber band ligation for 750 cases of symptomatic hemorrhoids out of 2200 cases. World J Gastroenterol. **2008**;14(42):6525–6530. doi: 10.3748/wjg.14.6525.

[4] Bernal J, Enguix M, López J, García J, Trullenque R. Rubber-band ligation for hemorrhoids in a colorectal unit. A prospective study. Rev Esp Enferm Dig. **2003**;96:38–45.

[5] François P, Laurent S, François A. Risk factors associated with hemorrhoidal symptoms in specialized consultation. Gastroentérologie Clinique et Biologique. **2005**;29(12):1270–1274. doi: 10.1016/S0399-8320(05)82220-1.

[6] Recommandations pour la Pratique Clinique sur le traitement de la maladie hémorroïdaire. Gastroenterol Clin Biol **2001**; 25(6-7): 674-702.

[7] Ayman M, Amir A, Waleed H, Elyamani M, Tito A, Hosam E. Rubber band ligation for 750 cases of symptomatic hemorrhoids out of 2200 cases. World J Gastroenterol. **2008**;14(42):6525–6530. doi: 10.3748/wjg.14.6525

[8] Blaisdell P. Office ligation of internal haemorrhoids. Am J Surg **1958**; 96:401–4. 9. Barron J. Office ligation of internal haemorrhoids. Am J Surg **1963**; 105:563–70

[9] Barron J. Office ligation of internal haemorrhoids. Am J Surg **1963**; 105:563–70.

[10] De Parades V, Bauer P, Parisot C, Atienza P. Traitement de la maladie hémorroïdaire. Gastroenterol Clin Biol **2000**; 24: 1211-1222

[11] Vassilios A, Komborozos V, Skrekas G, Pissiotis C. Rubber band ligation of symptomatic internal hemorrhoids: results of 500 cases. Dig Surg. **2000**;17:71–76. doi: 10.1159/000018803.

[12] Bernal JC, Enguix M, López García J, García Romero J, Trullenque. R. Rubber-band ligation for hemorrhoids in a colorectal unit.A prospective study. Rev Esp Enferm Dig **2003**; 96: 38-45.

[13] Soullard J, Contou JF. « Les hémorroïdes en colo-proctologie. », Masson ed, Paris, **1984** ; 75-112.