Quality of life in hemorrhoidal disease

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Original Article

Colorectal Surgery

OPEN ACCESS

Background

Introduction: Hemorrhoids are vascular cushions located beneath the distal rectal mucosa that can become symptomatic. Treatment options range from diet modifications and lifestyle changes to various medical and surgical interventions depending on the severity of the pathology. The impact of the disease on quality of life is increasingly becoming more significant, hence the importance of evaluation before and after treatment.

Methods: The hemorrhoidal disease symptom scale created by Rørvik was applied as a survey to clinic patients with a clinical diagnosis between December 2021 and January 2023. Subsequently, the statistical values were analyzed with a Chi-square probability test in SPSS 27.0.

Results: The symptomatic burden score for the surgical group was 11 points, while for the non-surgical group the score was 10 points with no statistically significant difference. However, the severity score was 12 points for the non-surgical group and 13 points for the surgical group.

Conclusions: Knowledge of the symptomatic behavior and burden of hemorrhoidal disease is crucial for therapeutic decision-making and understanding clinical follow-up in both conservative and surgical care. The scale translated into our language requires further adjustments to facilitate its use by patients, and a larger patient sample size is required to validate its usefulness in the study.

Keywords: Hemorrhoidal disease, quality of life

Hemorrhoids are vascular cushions located beneath the distal rectal mucosa, contributing to 15-20% of resting anal pressure, with a prevalence of 11% in the general population.[1] They can become symptomatic when inflamed, thrombosed, or prolapsed, with the cardinal symptom being painless rectal bleeding, thus potentially representing one of the leading causes of lower gastrointestinal bleeding. Significant advances in understanding and treating the pathology have been made thanks to descriptions by Milligan, Morgan, and Goligher in the first half of the last century.[2]

The incidence and prevalence of the pathology are not faithfully projected in general reports, but prospective studies estimate a prevalence of 50% by the age of 50, with the peak incidence occurring between 45-65 years.[3,4] The pathophysiology can be explained by the four processes that culminate in congestion of the hemorrhoidal sinuses, which are: Sliding of the anal cushion, relaxation of the cushion's connective tissue, reduction of venous return from the sinuses to the middle and upper rectal vein, and blood stasis within the dilated plexus.[5]

Multiple studies have shown the relationship between diet and hemorrhoidal disease. For over 35 years, it has been demonstrated that a diet rich in fats, alcohol, pepper, and low water consumption is associated with the disease[6]. The relative risk for fiber intake of less than 12g is 7.08 (95%CI 1.24 - 40.30; p=0.027), while water consumption of less than 2 liters is 8.68 (95%CI 3.07 - 24.51; p<0.001).[7]

There is significant controversy over the association of obesity with hemorrhoidal disease. Among the proposed hypotheses is the increase in intra-abdominal pressure as a risk factor for the development of hemorrhoidal disease, associated with the release of proinflammatory cytokines and acute phase reactants that contribute to the formation of hemorrhoidal disease. According to Riss et al., in an Australian study of 976 patients, an association between hemorrhoidal disease and obesity in healthy individuals was found by colonoscopy.[8] However, Perry et al. found no such association with a significantly larger sample size via colonoscopy.[9]

Demographic associations with hemorrhoidal disease through comorbidities and prescription of medications were exemplified in a Japanese study where they took the national insurer database and associated it with the standardized prescription index; an association was identified between the use of anti-hemorrhoidal medications in regions with lower

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 DOI 10.5281/zenodo.8019374

Question	Answer	Group A		Group B	
		Number	Percentage.	Number	Percentage.
Classification of Hemorrhoidal Disease	Grade II	9	28.1%	18	24.0%
	Grade III	11	34.4%	29	38.7%
	Grade IV	12	37.5%	28	37.3%
	Symptomatic scale				
How often do you experience pain from your hemorrhoids?	Never	1	3.1%	3	4.0%
	Less than once a month	8	25.0%	22	29.3%
	Less than once a week	10	31.3%	23	30.7%
	Between 1-6 times a week	11	34.4%	25	33.3%
	Every day	2	6.3%	2	2.7%
How often do you feel itchiness/discomfort in your anus?	Never	3	9.4%	9	12.0%
	Less than once a month	6	18.8%	16	21.3%
	Less than once a week	11	34.4%	26	34.7%
	Between 1-6 times a week	7	21.9%	13	17.3%
	Every day	5	15.6%	11	14.7%
How often do you bleed during bowel movements?	Never	1	3.1%	2	2.7%
	Less than once a month	1	3.1%	8	10.7%
	Less than once a week	7	21.9%	21	28.0%
	Between 1-6 times a week	16	50.0%	33	44.0%
	Every day	7	21.9%	11	14.7%
How often do you soil your underwear (due to leakage from your anus)?	Never	14	43.8%	35	46.7%
	Less than once a month	10	31.3%	21	28.0%
	Less than once a week	6	18.8%	10	13.3%
	Between 1-6 times a week	2	6.3%	8	10.7%
	Every day	0	0.0%	1	1.3%
How often do you experience prolapse of a hemorrhoid?	Never	1	3.1%	1	1.3%
	Less than once a month	1	3.1%	6	8.0%
	Less than once a week	4	12.5%	26	34.7%
	Between 1-6 times a week	18	56.3%	40	53.3%
	Every day	8	25.0%	2	2.7%
	Symptomatic burden severity				
From your perspective, how severe are the symptoms caused by your hemorrhoids?	1	2	6.3%	11	14.7%
	2	14	43.8%	21	28.0%
	3	4	12.5%	26	34.7%
	4	10	31.3%	6	8.0%
	5	1	3.1%	6	8.0%
	6	1	3.1%	3	4.0%

Table 1. Results of the symptomatic and severity scale of patients with hemorrhoidal disease.

DOI 10.5281/zenodo.8019374

	7	0	0.0%	2	2.7%
Do your symptoms interfere with your daily activities?	1	9	28.1%	21	28.0%
	2	8	25.0%	19	25.3%
	3	7	21.9%	17	22.7%
	4	3	9.4%	16	21.3%
	5	3	9.4%	2	2.7%
	6	2	6.3%	0	0.0%
	7	0	0.0%	0	0.0%
How concerned are you about your symptoms?	1	2	6.3%	9	12.0%
	2	8	25.0%	31	41.3%
	3	13	40.6%	9	12.0%
	4	6	18.8%	11	14.7%
	5	2	6.3%	8	10.7%
	6	1	3.1%	3	4.0%
	7	0	0.0%	4	5.3%
What is your overall sense of well-being?	1	3	9.4%	5	6.7%
	2	2	6.3%	16	21.3%
	3	1	3.1%	18	24.0%
	4	10	31.3%	17	22.7%
	5	8	25.0%	8	10.7%
	6	5	15.6%	5	6.7%
	7	3	9.4%	6	8.0%

Table 1. contd.

average annual temperature, along with greater prescription of antispasmodics, antiarrhythmics, antidiarrheals, intestinal regulators, psychotropics, anxiolytics, and opioids.[10]

In a review of 476 patients, the most prevalent symptom of the disease is bleeding (63%), followed by pain (48%), and protrusion (39%); colorectal services tend to receive patients referred from other services, with gastroenterologists and subsequently gynecologists being the specialists with the greatest diagnostic certainty. Protrusion is a symptom that can sensibly guide us towards the pathology, while pain and pruritus can lead to misdiagnosis by non-coloproctologists.[11]

The most commonly used classification for the disease is that of Goligher, known and used internationally despite its deficiencies in surgical indications for not considering the impact on quality of life, the etiopathogenesis of the disease, or specific conditions such as circumferential prolapse.[12,13] However, The Hemorrhoidal Disease Symptom Score published two years ago attempts to classify the pathology according to quality of life without focusing on therapeutic approach.[14]

For the treatment of Grade 1 and 2 hemorrhoidal disease, dietary modifications and maintaining appropriate bowel habits can be considered, though sclerotherapy, band ligation, and infrared coagulation can also be contemplated.[15,16] In the treatment of Grade II and III hemorrhoidal disease, multiple modalities can be employed, such as ultrasound-guided artery ligation, circular stapler hemorrhoidopexy, and rubber band ligation, with ultrasound-guided ligation causing less postoperative pain but having a higher recurrence rate and cost. The treatment of Grade 4 and external hemorrhoidal disease is considered surgical.[17]

Methods

DOI 10.5281/zenodo.8019374

This study was conducted over the course of one year, between December 2021 and January 2023, on a prospective basis. Patients who came to the private practice of a single coloproctologist for hemorrhoidal disease were assessed using the symptom scale for hemorrhoidal disease validated by Rørvik in 2019, see Annex 1. Subsequently, with equal emphasis on surgical and non-surgical patients, therapeutic options were presented, the only consideration being their severity index according to Goligher. An analysis was then carried out based on the patient's choice of therapy and to evaluate the main responses to symptoms of hemorrhoidal disease.

Inclusion criteria: All patients with hemorrhoidal disease from Goligher grade B onwards. Group A consists of patients who opted for some type of surgical treatment, and Group B consists of those who rejected it.

Statistical Analysis

The results were collected in an Excel database and then taken to SPSS 27.0 where a statistical analysis was performed using Chi-square for categorical and ordinal variables.

Results

Of the 107 patients included in the study, the distribution of patients considered those who underwent an office procedure in the same group as the surgical patients, totaling 32 patients. A total of 75 patients did not accept any procedure throughout the follow-up of the study, placing them in group B.

The mean age of presentation was 54.3 ± 10.2 years. In group A, the mean age was 62 ± 5.87 years, while in group B, the non-surgical group had a mean presentation age of 51.2 ± 7.3 years with a p-value of 0.021, without a statistically significant difference in age groups.

The results of the survey were categorized according to the incidence of symptoms. These are presented below in Table 1.

Discussion

The sensitivity of the symptom scale locates the score at 6.5 to determine a sensitivity and specificity of 72.2% and 90% for therapeutic response and change in decision-making, with good instrument reliability with a Cronbach's alpha of 0.773. Our Cronbach's alpha was found to be 0.61, so we can say that the results are completely reliable by survey design, possibly attributable to issues of language or patient abstraction, despite all questions being phrased positively and in simple language, except for the well-being question on the hemorrhoidal disease severity scale.

Non-surgical patients had a mean score of 10 points (range 5-18) for the symptom scale with a p-value of 0.032, while they averaged 12 points (range 7-27) for the hemorrhoidal disease severity scale.

Patients who underwent surgery had an average score of 11 points (range 6-17) on the symptom scale, while they scored 13 points (range 6-28) with a p-value of 0.02 for the severity scale of hemorrhoidal disease. Compared to different international studies, our population is situated in a mean of surgical candidate patients. Unlike other databases, ours does not include Goligher I, so the results are slightly higher.[18]

The symptoms with the greatest disease burden in the patients of group A were hemorrhoidal bleeding and hemorrhoidal prolapse, and the one that had the least impact was anal itching. Whereas in group B, the same symptoms predominated, with the difference that the least impactful symptom was soiling underwear.

Conclusion

Understanding the symptomatic behavior and disease burden of hemorrhoidal disease is important in therapeutic decision-making, as well as in understanding and objectifying clinical behavior in conservative follow-up and surgical follow-up. The scale translated into our language needs further adjustments to make it easier for patients and a larger number of patients to validate the usefulness of the study.

In the literature review, there is little evidence of the correlation between symptom burden/severity classifications with the Goligher scale, so it is advisable to keep it in mind when suggesting therapeutic options.

Conflicts of interests

The authors would like to declare that there is no conflict of interest

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 DOI 10.5281/zenodo.8019374

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 DOI 10.5281/zenodo.8019374

Appendix 1

Hemorrhoidal Disease Symptom Scale Questionnaire

Please answer only one option for each of the following questions. Your response should reflect your symptoms caused by hemorrhoidal disease.

1. How often do you experience pain from your hemorrhoids?
☐Never ☐Less than once a month ☐Less than once a week ☐Between 1-6 times a week ☐Every day
2. How often do you feel itchiness/discomfort in your anus?
☐Never ☐Less than once a month ☐Less than once a week ☐Between 1-6 times a week ☐Every day
3. How often do you bleed during bowel movements?
☐Never ☐Less than once a month ☐Less than once a week ☐Between 1-6 times a week ☐Every day
4. How often do you soil your underwear (due to leakage from your anus)?
☐Never ☐Less than once a month ☐Less than once a week ☐Between 1-6 times a week ☐Every day
5. How often do you experience prolapse of a hemorrhoid?
☐Never ☐Less than once a month ☐Less than once a week ☐Between 1-6 times a week ☐Every day

Severity of Symptom Burden

The following questions are about how hemorrhoidal disease affects your daily life. Please mark only one response.

1. From your perspective, how severe are the symptoms caused by your hemorrhoids? On a scale from 1-7, where 1 is "no symptoms" and 7 is "severe symptoms"
1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐
2. Do your symptoms interfere with your daily activities? On a scale from 1-7, where 1 is "not at all" and 7 is "a lot/too much"
1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐
3. How concerned are you about your symptoms? On a scale from 1-7, where 1 is "not at all" and 7 is "a lot/too much"
1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐
4. What is your overall sense of well-being? On a scale from 1-7, where 1 is "very good" and 7 is "very poor"
1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐

DOI 10.5281/zenodo.8019374