

The diagnostic value of squirting rectal bleeding: The first description of such bleeding pattern

Received: 29/9/2019

Accepted: 8/6/2020

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Abstract

Background and objective: Rectal bleeding is a common symptom that has many patterns, but none of them are accurately diagnostic. One newly noticed pattern can be diagnostic, namely, the squirting pattern, for which this study was conducted.

Methods: The study was conducted between Jan 2013 and Jun 2018, including 132 patients who presented with a squirting pattern of rectal bleeding, which is thought to be due to hemorrhoids. All these patients underwent clinical evaluation and anoscopy, and the majority (n=94) underwent colonoscopy.

Results: At the time of clinical examination, 23 patients showed actively bleeding hemorrhoids. Fifteen patients were not convinced to undergo colonoscopy. The rest (n=94) who had no visible active bleeding at the time of examination underwent a colonoscopy to exclude other possible rectal or colonic pathology. All the 94 colonoscopies were negative for other bleeding sources. Two patients showed single benign non bleeding polyps, which were excised and biopsied.

Conclusion: This study highlights a pattern of rectal bleeding that is not described before and proved it is a reliable diagnostic pattern for hemorrhoids. It also showed that colonoscopy is not needed in patients below 40 years complaining of squirting rectal bleeding unless indicated for some other reason. This decision is to be made very carefully.

Keywords: Squirting rectal bleeding; Hemorrhoids; Colonoscopy.

Introduction

Rectal bleeding is one of the common symptoms encountered at outpatient clinics. Various terms are used to describe blood emanating from the lower intestinal tract, including hematochezia, rectal bleeding, and bright red blood per rectum. These terms do not indicate the acuity or severity of bleeding and do not always localize the bleeding source.¹ The annual incidence of rectal bleeding varies between 27² and 87³ per 100,000 populations/year. Rectal bleeding can represent many conditions that affect the gastrointestinal tract, ranging from very mild and trivial to more serious conditions.^{1,4-6} It can be a symptom of colorectal cancer, about 40% of patients with colorectal cancer have rectal bleeding. However, the risk of

colorectal cancer for a patient with rectal bleeding is thought to be relatively low.⁵ At presentation, rectal bleeding takes many patterns, ranging from occult blood in stool, melena, mixed blood with stool, blood on the surface of the stool, the red color on toilet paper, fresh blood in the toilet, and dripping.⁷⁻¹⁰ But these patterns of rectal bleeding failed to help in reaching a definite source or to exclude a serious disease without the aid of colonoscopy,^{6, 8, 9,11-13} or sigmoidoscopy.¹³ Among those patients with classic outlet bleeding, a specific pattern, namely the "squirting" or spraying of blood during straining for defecation, is continuously underestimated. This pattern is even not mentioned in the literature. The patient usually describes it as if the blood is ejected from a syringe,

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leaving red spots on the sidewalls of the toilet. Asking patients to strain on physical examination had been successful in some cases to see the spraying of blood from a protruding pile. This was considered a strong evidence for the diagnosis of hemorrhoids. However, the majority failed to show this evidence and needed another aid to confirm and localize the bleeding source and to exclude other possible concomitant bleeding sources. To achieve this goal, the suitable tool chosen is colonoscopy. This study is designed to assess patients presented with squirting rectal bleeding, excluding those who were actively bleeding during physical examination.

Methods

All patients (n=132) presented with complaints of squirting rectal bleeding between January 2013 and June 2018 are registered, including steps of evaluation and their results. On straining, these patients got their bleeding in jets that leave red spots on the sidewall of the toilet. Some described it as if pushed from a syringe. Others needed to lead them for this descriptive picture by the examiner. A full history was taken, including the history of hemorrhoids, bleeding per rectum, bleeding pattern, any other gastrointestinal symptoms, bleeding disorders, and drug history. None of the patients received any anticoagulants. At the time of clinical examination and anoscopy, the patient was asked to strain as much as possible to see any active bleeding from the anal verge or anal canal, whose mucosal lining usually pouts out on straining. The presence of hemorrhoids was assessed, and the grades were registered. Any spots of ulcerations were noticed and considered in the recording. Only 23 patients were showing visible actively bleeding hemorrhoids during the examination. This was considered satisfactory evidence of the real cause of bleeding, and no further studies were done. However, 109 patients

were showing hemorrhoids, with no visible active bleeding, with or without surface ulcerations. All patients were sent for hematologic tests, including complete blood picture, blood group, PT/INR, fasting blood sugar, blood urea, and serum creatinine. Fifteen patients were not totally convinced to proceed for colonoscopy examination, and 94 patients (71 males & 23 females) were sent to the endoscopy center, where informed consent was obtained before performing colonoscopy to exclude any other possible bleeding source. Colonoscopy is considered a proper diagnostic aid for lower gastrointestinal hemorrhage.^{10,11,14-16} Data collection was conducted from January 2018 to complete 5 years study duration. The statistical package for the social sciences (version 25) was used for data entry and analysis. Categorized variables had been presented as frequencies and percentages. A *P* value of <0.05 was considered statically significant. Exclusion criteria: Patients who were actively bleeding at the time of examination (n=23) and patients not convinced to undergo colonoscopy (n=15) were excluded. The study protocol was approved by the Research Ethics Committee of the College of Medicine, Hawler Medical University (reference number 7 on December 20, 2018).

Results

Out of the total number of patients (132), 109 patients gave a history of hemorrhoid before (82.6%), the rest (17.4%) denied a history of hemorrhoid before. Twenty-two patients gave a history of previous rectal bleeding (16.7%), but the majority of the patients (n=110) did not give any history of rectal bleeding (83.3%), as shown in Table 1. Regarding bowel habits, in the past year before presentation, constipation was predominant in 112 patients (84.9%), loose stool in 6 patients (4.5%), and 14 patients (10.6%) showed normal or near normal bowel motions (Table 2). Among the patients who presented with squirting

rectal bleeding, 30 patients (22.7%) were having 1st degree hemorrhoid, 42 patients (31.8%) with 2nd degree hemorrhoids, 51 patients (38.7%) with 3rd degree hemorrhoids, and nine patients (6.8%) with

4th degree hemorrhoids (Table No. 4). Only six patients had their hemoglobin below 10 gm/dl. In 22 patients, the hemoglobin was (10 – 13 gm/dl), and the rest (n=100) were within the normal range (Table 3).

Table 1: Distribution of patients according to the past history of hemorrhoids and rectal bleeding

Variables	No.	(%)
Past history of hemorrhoids		
Yes	109	(82.6)
No	23	(17.4)
Past history of rectal bleeding		
Yes	22	(16.7)
No	110	(83.3)
Total	132	(100.0)

Table 2: Bowel habits of patients with squirting rectal bleeding.

Variables	No.	(%)
Constipation	112	(84.9)
Loose stool	6	(4.5)
Normal or near normal	14	(10.6)
Total	132	(100.0)

Table 3: Degree of hemorrhoids in patients with squirting rectal bleeding.

Variables	N	(%)
First degree hemorrhoids	30	(22.7)
Second degree hemorrhoid	42	(31.8)
Third degree hemorrhoid	51	(38.7)
Forth degree hemorrhoid	9	(6.8)
Total	132	(100.0)

The number of patients who underwent colonoscopy was 94, including 71 (75.53%) males and 23 (24.47%) females, with a male to female ratio of 3:1. Only one patient (1.06%) was below the age of 16 years, while 64 patients (68.09%) were within the age group 16-29 years, and 28 patients (29.79%) were within the age group of 29-39 years. Only one patient

(1.06%) was aged above 40 years (Table 4). The mean age was 26 years. Colonoscopy examinations revealed that all 94 patients were free from other bleeding sources apart from hemorrhoids. Two patients (37 and 42-year-old) showed single benign non-bleeding polyps at the distal colon; both were excised endoscopically and biopsied (Table 5).

Table 4: Demographic characteristics of the participants.

Variables	No.	(%)
Gender		
Male	71	(75.53)
Female	23	(24.47)
Age group		
≤15 years	1	(1.06)
16- 29 years	64	(68.09)
30 – 39years	28	(29.79)
≥40	1	(1.06)
Total	94	(100.0)

Table 5: Colonoscopic findings of the participants.

Findings	No.	(%)
Hemorrhoid	92	(97.87)
Hemorrhoid plus non-bleeding polyp	2	(2.13)
Other lesions	0	(0)
Total	94	(100.0)

Discussion

This study described a pattern of rectal bleeding, namely, the squirting one, that seems to be unnoticed or underestimated before. However, it could be a reliable diagnostic pattern for hemorrhoids, proved by colonoscopy exclusion and its mechanism of initiation, which is unique for hemorrhoids. The mechanism of initiation involves straining that causes congestion and swelling of hemorrhoid, increasing intrahemorrhoidal pressure, followed by rupture at a weak point allowing spraying of blood under pressure. It needs special attention from the examining doctor on taking history for rectal bleeding. The mean age for the participants was 26 years. The oldest patient in the study was only 42-year-old. This may raise the suggestion that squirting rectal bleeding belongs only to young people, which in turn needs an explanation. Probably younger patients can develop more powerful straining and consequently more intrahemorrhoidal pressure. Out of the total number of patients (132), 109 (82.6%) patients gave a history of having hemorrhoids before (Table 1). This suggests that probably other hemorrhoidal symptoms may precede the squirting rectal bleeding to appear. Constipation was predominant in 112 patients (84.9%). This factor is a well-known predisposing factor for the progression of hemorrhoids,¹⁷ and, in this study, is associated with squirting rectal bleeding. Internal hemorrhoids are graded into four grades or degrees, according to their progress.¹⁸ It seems there is a variable association between these grades and squirting rectal bleeding. It has a stronger association with 2nd and 3rd degree hemorrhoids (31.8% and 38.7%, respectively) in comparison to 1st and 4th degrees (22.7% and 6.8%, respectively). Regarding the male to female ratio (3:1), it probably has no important significance due to cultural reasons (where females prefer to consult a female doctor for such health problems). During the colonoscopy, which is an effective diagnostic tool,¹⁴⁻¹⁶ all the

patients (n=94) with squirting rectal bleeding have failed to show another bleeding source. This finding indicates that squirting rectal bleeding is a useful diagnostic symptom, and no further diagnostic studies are needed unless indicated. However, two patients were harboring a benign polyp. With the rising incidence of colorectal cancer among the younger population,¹⁹ and the annual increase of colorectal cancer among individuals aged younger than 50 years by approximately 2%,²⁰ still colonoscopy is considered by the author's opinion the mainstay of early detection of large bowel incidental lesions including colorectal cancer. It is recommended whenever there is the slightest suspicion. Considering squirting pattern of rectal bleeding as a diagnostic signal must be very carefully accepted, and repeating examination with close follow up is strongly mandated.

Conclusion

The squirting pattern of rectal bleeding is a useful diagnostic pattern in patients below 40 years of age. With it, colonoscopy is not needed unless indicated for some other reasons. This decision must be very carefully accepted. Repeating the examination with close follow-up is strongly advised. Constipation is obviously associated with squirting rectal bleeding. This pattern of rectal bleeding is underestimated and is even not mentioned in the literature.

Competing interests

The author declares no competing interests.

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