

# Massive Rectal Bleeding After Rubber Band Ligation of Internal Hemorrhoids: A Case Report

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## ABSTRACT

**Introduction:** Rubber band ligation (RBL) is a common treatment for internal hemorrhoids. Although generally safe, complications such as delayed bleeding can occur, particularly in patients taking anticoagulants, antiplatelets, or nonsteroidal anti-inflammatory drugs (NSAIDs).

**Case Presentation:** A 34-year-old White woman presented with massive rectal bleeding 15 days after suction RBL of internal hemorrhoids. She was not taking anticoagulants, antiplatelets, or NSAIDs and had no history of bleeding disorders. Flexible sigmoidoscopy revealed a 10-mm ulcer with a visible vessel at the previous banding site. Hemostasis was achieved with clip placement and hemostatic spray. She recovered without further complications.

**Discussion:** Massive bleeding following RBL is rare, especially in patients without traditional bleeding risk factors. Literature review identified only one similar case. Most reported cases involve patients on aspirin or other blood-thinning agents. This case adds to the limited data on severe post-RBL bleeding in low-risk individuals and highlights the potential for delayed presentation.

**Conclusions:** This case highlights the potential for delayed and significant bleeding post-RBL, even in patients without traditional bleeding risk factors. Vigilance beyond the immediate postoperative period is essential, and patients should be counseled on signs of delayed complications.

## INTRODUCTION

Rubber band ligation (RBL) of hemorrhoids has been used since the 1960s and is an established treatment for first- to third-degree internal hemorrhoids. It works by causing retraction and fibrosis of the hemorrhoidal vessels.<sup>1</sup> RBL has demonstrated greater long-term efficacy compared with other nonsurgical treatment options,

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such as sclerotherapy and infrared coagulation, although it is associated with a higher rate of posttreatment pain.<sup>2</sup>

The most common complications of RBL include pain, mild bleeding, urinary symptoms, anal fissure, vasovagal symptoms, and band slippage. More severe complications include massive bleeding, pelvic sepsis, fistula, and even death.<sup>3</sup> Secondary bleeding most commonly occurs 10 to 14 days after the banding procedure.

We report the case of a 34-year-old woman not taking anticoagulant, antiplatelet, or nonsteroidal anti-inflammatory drugs (NSAIDs), who presented 15 days after suction RBL with massive rectal bleeding.

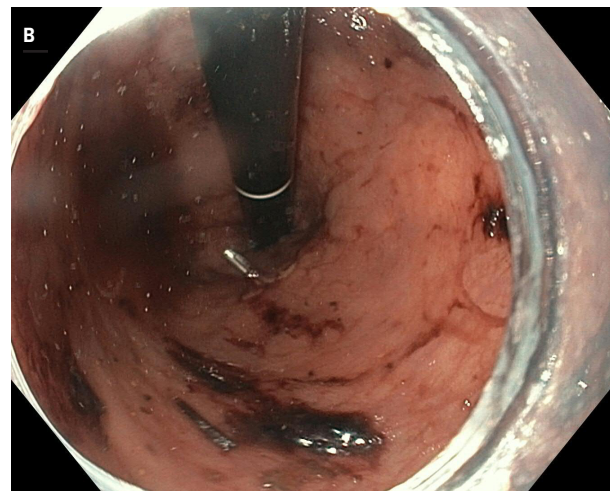
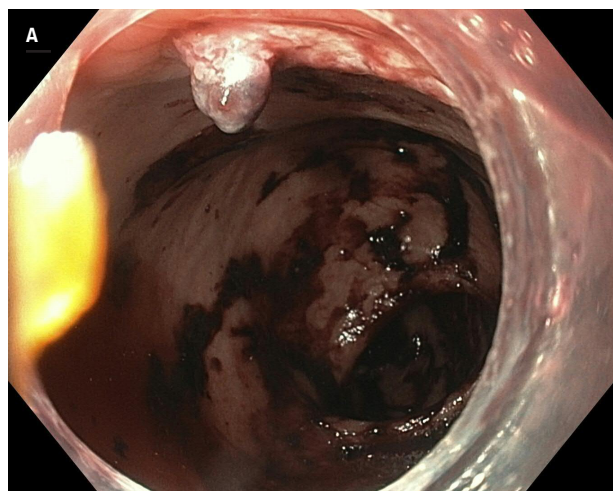
## CASE PRESENTATION

This case describes a 34-year-old White woman with medical history of generalized anxiety disorder treated with sertraline, 100 mg daily, and hemorrhoids, who presented 15 days after suction hemorrhoid banding with significant rectal bleeding. She was not taking any anticoagulant, antiplatelet, or NSAID medications and had no known history of bleeding disorders, abnormally bleeding, or heavy menstrual bleeding.

The patient initially was evaluated in the office for hemorrhoids; examination revealed 2 internal and 1 external hemorrhoid. Treatment options were discussed, and she elected to undergo excision of the external hemorrhoid and banding of the internal hemorrhoids under general anesthesia.

Under anesthesia, two grade 2 internal hemorrhoids—left lateral and right posterior—with stigmata of bleeding were identified. Suction banding was performed on both internal hemorrhoidal columns. An external hemorrhoid located to the right of the ante-

**Figure.** Sigmoidoscopy Images of Rectal Hemorrhoid



1A. Right posterior rectum with 10-mm solitary ulcer with a visible vessel but no active bleeding.  
1B. Rectum with hemostatic clip in retroflexed view..

rior midline, without thrombosis or ischemia, was excised using electrocautery, and the defect was reapproximated without difficulty. The patient was discharged the same day without significant pain or any signs of bleeding.

Fifteen days after the banding procedure, the patient presented to the emergency department (ED) after passing large blood clots and painless bright red blood per rectum. Prior to the onset of bleeding, her recovery had been uneventful, with limited discomfort or initial bleeding. She was not taking NSAIDs, antiplatelet medications, or anticoagulants.

On physical examination in the ED, no brisk active bleeding was observed, but an adherent clot was noted in the anal canal on the right side. Laboratory results included hemoglobin of 10.9 g/dL (reference range: 11.6-15 g/dL), prothrombin time of 11.4 seconds (reference range: 9.4-12.5 seconds), and an unremarkable basic metabolic panel. Vitals signs were within normal limits, and the patient was hemodynamically stable. Due to the absence of recent hemoglobin measurements, the degree of hemoglobin drop was unclear, although it was lower than the institutional reference range.

The general surgery team discussed management options with the patient, including immediate operative evaluation or overnight observation with examination under anesthesia the following day. The patient chose observation overnight.

Given the risk of recurrent bleeding, the team and patient agreed that flexible sigmoidoscopy under anesthesia would be the most appropriate next step to assess for ulceration and identify a potential bleeding source. The procedure was performed in the operating room to allow for immediate intervention if necessary.

Sigmoidoscopy identified the 2 previously banded areas. The left lateral site had healed well, with no evidence of bleeding.

The right posterior site showed a 10-mm solitary ulcer with a visible vessel but no active bleeding (Figure 1A). Stigmata of recent bleeding were present, and a gastroenterologist placed 1 hemostatic clip on the visible vessel (Figure 1B). Hemostatic spray was also applied. The patient tolerated the procedure well; she spent the night in the hospital for observation and was discharged the following day without further complications. Hemoglobin at discharge was 9.1, with no additional evidence of bleeding.

## DISCUSSION

Massive rectal bleeding is a rare complication of suction hemorrhoid banding and has been described minimally in current literature. This case involves a 34-year-old woman who presented 15 days after suction RBL of internal hemorrhoids with massive rectal bleeding. Notably, she was not taking anticoagulant, antiplatelet, or NSAID medications, all of which are known to increase bleeding risk.

Only 1 other case has been reported involving massive rectal bleeding in a patient not taking these medications. That case, described by Jiang et al in 2022,<sup>4</sup> involved a patient who presented 7 days after endoscopic RBL with diffuse rectal bleeding. The case presented here differs in the timing of the bleeding—7 days in the Jiang report versus 15 days in this case.

Massive rectal bleeding following RBL is more common in patients taking blood-thinning or antiplatelet agents. A study by Bat et al<sup>5</sup> evaluated outcomes in 512 patients who underwent RBL and found that 6 patients (1.2%) experienced massive bleeding complications, 5 of whom were taking aspirin regularly. A separate report by Patel et al<sup>6</sup> in 2014 described 2 cases of patients on aspirin who presented with massive rectal bleeding 14 and 15 days, respectively, after hemorrhoid band ligation.

## CONCLUSIONS

This case, along with the few others discussed, serves as an important reminder that even procedures generally regarded as safe and straightforward carry the risk of serious complications. While anti-coagulants, NSAIDs, and antiplatelet agents are known to increase bleeding risk, this case demonstrates that significant bleeding can occur in patients without these risk factors.

As illustrated here, post-banding bleeding can be delayed, occurring up to 15 days after the procedure. Therefore, both physicians and patients must remain vigilant and aware of these potential complications, even beyond the immediate postoperative period.

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**Informed Consent:** Informed patient consent was obtained for publication of case details.

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