**DOI:** https://doi.org/10.5281/zenodo.19473052

**ISR Journal of Surgery (ISRJS)**

**Homepage:** https://isrpublisher.com/isrjs/

**Volume 02, Issue 04, April 2026** ISSN: 3107-8621 (Online)

# Mucocutaneous Bridge Preservation During Three-Pedicle Milligan-Morgan Hemorrhoidectomy for Acutely Thrombosed Mixed Hemorrhoids: A Surgical Case Report

**Abdelilah Hamada[1]*, Achraf Bahi[1], Badr Moujahid[1], Mohammed Najih[1], Hicham Laraqui[1], Mohamed Tariq Tajdine[2]**

[1]Department of Proctology, Mohammed V Military Teaching Hospital, Faculty of Medicine and Pharmacy, Mohammed V University, Rabat, Morocco
[2]Surgical Unit, Mohammed V Military Teaching Hospital, Faculty of Medicine and Pharmacy, Mohammed V University, Rabat, Morocco

***Corresponding author:** Abdelilah Hamada
Department of Proctology, Mohammed V Military Teaching Hospital, Faculty of Medicine and Pharmacy, Mohammed V University, Rabat, Morocco

## Article History

Received: 06-02-2026

Accepted: 05-04-2026

Published: 08-04-2026

**Abstract:** **Case Report**

***Introduction*:** Excisional hemorrhoidectomy remains a major surgical option for advanced hemorrhoidal disease, particularly in patients with bulky mixed internal-external hemorrhoids and thrombosed piles. One of the most important technical principles of open hemorrhoidectomy is preservation of mucocutaneous bridges in order to reduce the risk of postoperative anal stenosis. ***Case presentation*:** We report the case of a 45-year-old woman with a past surgical history of ovarian cyst surgery 7 years earlier, who underwent surgery for symptomatic mixed hemorrhoidal disease with marked thrombosis. Under regional anesthesia, operative exploration of the anal verge and anal canal demonstrated mixed internal and external hemorrhoids with three major hemorrhoidal piles: a large thrombosed pile at the 3 o'clock position and two additional large piles at the 8 and 11 o'clock positions. A three-pedicle Milligan-Morgan hemorrhoidectomy was performed. Because organized clots extended between the external components of the resected piles, limited interpedicular mini-excisions with suture-assisted clot extraction were added while deliberately preserving the intervening mucocutaneous bridges. ***Clinical discussion*:** This case illustrates a practical refinement of conventional open hemorrhoidectomy in the setting of thrombosed mixed hemorrhoids. Adequate treatment of thrombosed external components must be balanced against strict preservation of viable anoderm and mucosal bridges. In this patient, targeted interpedicular clot evacuation allowed treatment of thrombotic extensions without converting the operation into a circumferential excision pattern. ***Conclusion*:** In acutely thrombosed mixed hemorrhoids requiring excisional surgery, preservation of mucocutaneous bridges should remain a non-negotiable operative principle. Selective interpedicular clot extraction may be added when necessary, provided that bridge integrity is maintained to minimize the risk of postoperative anal stenosis.

**Keywords:** Hemorrhoidectomy, Milligan-Morgan, Thrombosed Hemorrhoids, Anal Stenosis, Mucocutaneous Bridge, Case Report.



## 1. INTRODUCTION

Hemorrhoidal disease is common, but only a subset of patients require surgery. Excisional hemorrhoidectomy remains one of the most established operative treatments for advanced internal-external hemorrhoids, especially in large grade III-IV disease and in complicated or thrombosed piles [1–3].

Although highly effective, open hemorrhoidectomy may lead to disabling late complications when tissue excision is excessive. Among these, postoperative anal stenosis is one of the most feared functional sequelae. Reviews of anal stenosis emphasize that it is most often iatrogenic after anorectal surgery, particularly after overly aggressive hemorrhoidectomy with excessive loss of anoderm and mucosa [4, 5].

For this reason, preservation of adequately wide mucocutaneous bridges between hemorrhoidectomy wounds is a core technical principle of the Milligan-Morgan operation [2, 4, 5].

We report a case of acutely thrombosed mixed hemorrhoids treated by three-pedicle open hemorrhoidectomy according to Milligan and Morgan, with adjunctive limited interpedicular mini-excisions for clot extraction while preserving the mucocutaneous bridges. The main teaching point of this case is the operative importance of respecting these bridges in order to avoid anal stenosis without compromising adequate treatment of interpedicular thrombotic extension.

## 2. Case presentation

A 45-year-old woman was admitted for surgical treatment of symptomatic hemorrhoidal disease. Her past surgical history was notable for ovarian cyst surgery performed 7 years earlier. No other major relevant medical history was reported.

Under regional anesthesia, exploration of the anal verge and anal canal demonstrated **mixed internal and external hemorrhoids** with **three major hemorrhoidal pedicles**. A **large thrombosed hemorrhoidal pile** was identified at the **3 o'clock** position, while two additional sizeable hemorrhoidal piles were present at the **8 o'clock** and **11 o'clock** positions. Thrombotic extension was also noted between the external components of the main hemorrhoidal packets.

Because of the bulky mixed disease, the marked thrombosis, and the prominent external component, operative management by **three-pedicle Milligan-Morgan hemorrhoidectomy** was selected.

**Figure 1: Preoperative operative view showing bulky mixed hemorrhoidal disease with marked prolapse and thrombosed external components**

## 3. Surgical technique

The patient was placed in the operative position and the anal canal was exposed. The three principal hemorrhoidal pedicles were clearly identified. Open hemorrhoidectomy was then carried out according to the **Milligan-Morgan technique**, with pedicle-by-pedicle dissection, ligation, and excision of the principal hemorrhoidal packets [2, 3].

**Figure 2: Intraoperative dissection of a principal thrombosed hemorrhoidal pedicle during three-pedicle Milligan-Morgan hemorrhoidectomy**

Particular care was taken to avoid broad circumferential resection. The excision was deliberately limited to the diseased pedicles, preserving viable **interpedicular mucocutaneous bridges**. However, because organized thrombotic material extended between the external portions of the resected hemorrhoidal piles, additional **small**

**interpedicular mini-excisions** were made only where necessary to permit evacuation of these clots.

These accessory openings were short, targeted, and clearly separated from the main excisional wounds by preserved anoderm and mucosa. Suture-assisted traction and extraction allowed removal of the organized thrombotic material without converting the operative field into a continuous circumferential wound.

The hemorrhoidal packets located at the principal pedicles were ligated and resected. Hemostasis was checked carefully, a dressing was applied, and the specimen was sent for histopathological examination. The final operative appearance demonstrated a segmented wound pattern with preserved mucocutaneous bridges between excision sites.

**Figure 3: Final operative view showing three-pedicle hemorrhoidectomy wounds with preservation of mucocutaneous bridges between the excision sites**

## 4. DISCUSSION

This case highlights a fundamental operative principle in hemorrhoid surgery: the quality and safety of excisional hemorrhoidectomy depend not only on complete removal of symptomatic tissue, but also on the surgeon's ability to preserve the tissues that should not be resected.

Current guidance supports excisional hemorrhoidectomy as an important treatment option for selected patients with advanced hemorrhoidal disease, especially when the hemorrhoids are large, mixed, prolapsed, or associated with a substantial external component [1]. Reviews of conventional surgical management likewise recognize Milligan-Morgan hemorrhoidectomy as a durable and established operation in these settings [2, 3].

At the same time, postoperative anal stenosis remains a classic complication of overaggressive excisional surgery. Contemporary reviews note that anal stenosis is most commonly caused by excessive resection of anoderm and distal rectal mucosa during hemorrhoidectomy, and that preservation of anoderm bridges between wounds is essential to prevent circumferential scar contracture [4, 5].

This principle is especially relevant in thrombosed mixed hemorrhoids. In such cases, the visible extent of thrombosis may tempt the surgeon to enlarge the excision planes and connect the operative wounds in order to remove all diseased tissue en bloc. However, this approach risks sacrificing the bridges that preserve anal canal caliber. Technical recommendations for Milligan-Morgan hemorrhoidectomy specifically emphasize assessing how many piles should be resected and how much bridge width should be preserved, underscoring that bridge preservation is integral to the operation rather than an optional refinement [5].

The originality of the present case lies in the management of **interpedicular thrombotic extension**. Instead of joining the main hemorrhoidectomy wounds, we used **limited accessory interpedicular openings** to evacuate organized clots while leaving the bridges intact. This preserved a segmented wound configuration and respected the reconstructive anatomy of the anoderm. Conceptually, this is important because large circumferential excisions have long been associated with higher risks of stenosis and poor functional outcome, whereas tissue-preserving approaches seek to avoid those complications by maintaining viable bridges and reducing circumferential scar burden [4, 6].

In practical terms, this case supports four technical lessons. First, the principal symptomatic pedicles should be excised

adequately. Second, interpedicular thrombotic extensions may be treated selectively through small accessory openings when needed. Third, viable mucocutaneous bridges should never be sacrificed merely to regularize the wound. Fourth, the final operative field should remain **segmental rather than circumferential** [4, 5].

This report also fits the logic of structured surgical case reporting recommended by the SCARE 2020 guideline, which provides a framework for transparent reporting of operative cases [7].

## 5. CONCLUSION

In acutely thrombosed mixed hemorrhoids, Milligan-Morgan hemorrhoidectomy remains an appropriate and effective excisional option in selected patients [1–3]. However, the present case demonstrates that adequate treatment of thrombotic extensions must not come at the cost of mucocutaneous bridge sacrifice. Preservation of these bridges is a key technical safeguard against postoperative anal stenosis and should be regarded as a mandatory principle of open hemorrhoidectomy [4, 5].

## 6. Learning points

1. Open Milligan-Morgan hemorrhoidectomy remains a valid operation for bulky mixed and thrombosed hemorrhoids [1–3].
2. Post-hemorrhoidectomy anal stenosis is mainly related to excessive excision of anoderm and mucosa [4, 5].
3. Preservation of mucocutaneous bridges is a central technical principle of safe excisional hemorrhoidectomy [2, 4, 5].
4. Limited interpedicular mini-excisions can be used for clot extraction without converting the surgery into a circumferential wound pattern.

## 7. Ethical statements

**Consent:** Written informed consent was obtained from the patient for publication of this case report and the accompanying images.

**Ethical approval:** Not required for a single case report according to local institutional practice.

**Conflict of interest:** The authors declare no conflict of interest.

**Funding:** No funding was received.

**Guarantor:** Abdelilah Hamada

**Reporting guideline:** This manuscript is reported in line with the SCARE 2020 guideline [7].

## REFERENCES

1. Clinical Practice Guidelines Committee of the American Society of Colon and Rectal Surgeons. (2024). The American Society of Colon and Rectal Surgeons Clinical Practice Guidelines for the Management of Hemorrhoids. *Diseases of the Colon and Rectum*, *67*(5), 614-623. doi: 10.1097/DCR.0000000000003276.
2. Brown, S. R. (2017). Haemorrhoids: an update on management. *Therapeutic advances in chronic disease*, *8*(10), 141-147. doi: 10.1177/2040622317713957.
3. Pillant-Le Moult, H., Aubert, M., & De Parades, V. (2015). Classical treatment of hemorrhoids. *Journal of visceral surgery*, *152*(2), S3-S9. doi: 10.1016/j.jviscsurg.2014.09.012.
4. Leventoglu, S., Mentes, B., Balci, B., & Kebiz, H. C. (2022). New techniques in hemorrhoidal disease but the same old problem: anal stenosis. *Medicina*, *58*(3), 362. doi: 10.3390/medicina58030362.
5. Mehta, C. H., & Honaker, M. D. (2025). Diagnosis and Management of Anal Stenosis. *Diseases of the Colon & Rectum*, *68*(1), 9-12. 2024 update/review source discussing preservation of anoderm bridges between excision sites. Use the journal/site-approved citation format required by your target journal.
6. Brusciano, L., Gambardella, C., Tolone, S, *et al*., Combined mucopexy & Milligan-Morgan's technique in circumferential 4th degree prolapsed hemorrhoids. *Ann Med Surg (Lond)*. 2023. Use final journal citation format if you decide to keep this comparative technical reference.
7. Agha, R. A., Franchi, T., Sohrabi, C., Mathew, G., Kerwan, A., Thoma, A., ... & Mei, Z. (2020). The SCARE 2020 guideline: updating consensus surgical CAse REport (SCARE) guidelines. *International journal of surgery*, *84*, 226-230. doi: 10.1016/j.ijsu.2020.10.034.