



Trauma and reconstruction

Rapid adoption of penoscrotal decompression for ischemic priapism in private practice

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ARTICLE INFO

Keywords:

Ischemic priapism
Penoscrotal decompression
Penile shunt
Private practice
Refractory

ABSTRACT

Refractory ischemic priapism is a difficult to treat clinical entity for which there are a host of shunt procedures identified, but no singular agreed upon technique for surgical therapy. Recent literature describes success using a penoscrotal decompression technique that uses a similar dissection of a penoscrotal penile prosthesis placement. We demonstrate that this technique is easily applicable in the private practice setting as it uses a familiar setup to most general urologists in our case report.

1. Introduction

Refractory ischemic priapism (RIP) is defined as ischemic priapism that persists despite corporal aspiration, irrigation, phenylephrine and distal shunting. Current guidelines recommend repeating distal shunts with tunneling in these cases. When distal shunts fail the general urologist is faced with a conundrum. Proximal shunts are now described as a historic procedure. Only 30% of these procedures are successful, and only 27.5% of patients experienced preserved erectile function after proximal shunting.¹ Additionally, these techniques are not familiar to community urologists.

RIP is an entity that often leads a urologist to review clinical guidelines and literature as it is infrequently encountered. Morey et al. described a technique for decompressing the corpora by way of a penoscrotal incision which utilizes the same dissection used for penoscrotal placement of a penile prosthesis.²

Corporal decompression is thought to relieve priapism via the same mechanism of needle aspiration and irrigation. Washing out ischemic blood thereby allowing the penis' natural venous drainage mechanism to terminate the erection. The corporotomy described in Morey's technique is large enough to be effective in those who have already failed needle decompression. After the priapism is taken down, corporal stay sutures are tied closing the corporotomy which should lead to lower risk of erectile dysfunction compared to proximal shunts and aggressive tunneling. We describe the ease at which this technique was adopted in a patient presenting with RIP.

2. Case presentation

A 48 year old Hispanic male presented to the emergency department after developing a painful erection for the past 24 hours. He denied any trazodone use or phosphodiesterase 5 inhibitor use. He notes that he has rotated through at least 6 psychotropic medications to include SSRIs and antipsychotics in the past year, but does not know the names of his current medications. The emergency medicine physician aspirated and irrigated his corpora noting return of dark chocolate colored blood and corporal blood gas noted acidemia, hypoxia and hypercapnia all diagnostic of ischemic priapism. They subsequently administered 1000mcg of phenylephrine in 100mcg aliquots.

The emergency department noted transient detumescence but his erection recurred and upon evaluation by urology his penile shaft was rigid and painful with a soft glans (Fig. 1).

The decision was made to proceed to the operating room. We performed the penoscrotal decompression technique. In brief a transverse penoscrotal incision was used to expose the left corpora and a vertical proximal corporotomy was made between Vicryl stay sutures. Return of dark chocolate colored blood was noted and it was drained (Fig. 2). Detumescence was noted, a 10 french round drain was placed, the corporotomy was closed, and after a period of observation the penis remained flaccid (Fig. 3).

On postoperative day 1 the patient's penis was flaccid, his incision was healing well, his drain was removed, and he was discharged without issue.

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<https://doi.org/10.1016/j.eucr.2024.102681>

Received 12 February 2024; Accepted 13 February 2024

Available online 19 February 2024

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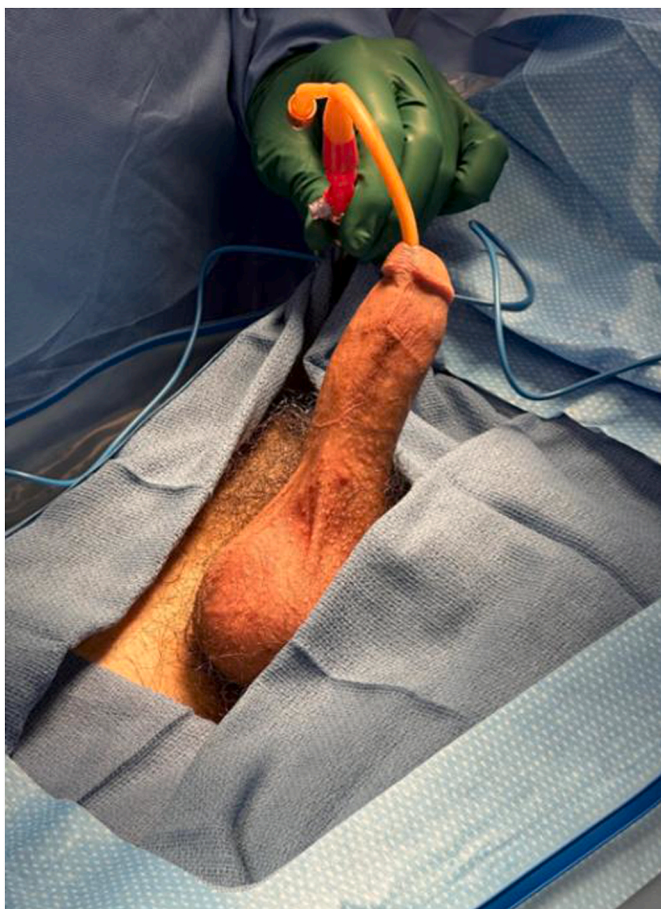


Fig. 1. Priapism recurrence after initial takedown.

Upon followup in clinic the patient reports return of spontaneous nocturnal erections.

3. Discussion

The number of techniques listed for distal and proximal shunts are indicative of the fact that we don't have a singular surgical therapy that is most successful. The penoscrotal decompression technique uses an approach familiar to penile implanters. Additionally, there is budding evidence that it carries a lower risk of erectile dysfunction as the corporal defects made are closed after resolution of priapism. In a recent series of 15 patients who underwent penoscrotal decompression, 60% reported spontaneous erections sufficient for sex at long term followup.³ This is despite their mean duration of priapism of 71 hours.³

There may also be benefits of avoiding a procedure that violates the glans penis. A penoscrotal incision is less disfiguring than a corpoglanular shunt and there is reduced risk of erosion if the patient requires a penile prosthesis in the future.³ Salvage of ischemic priapism with a malleable penile prosthesis is conceptually a great idea. Men with long ischemic episodes have poor erectile outcomes and dilating the corpora is a definitive way to take down priapism.⁴ However, malleable devices may not be stocked in many hospitals and even in that case there can be issues with insurance coverage which may financially burden a distressed patient. This technique is traditionally employed after priapism



Fig. 2. Ischemic blood noted after corporotomy.

is refractory to distal shunting leading to a high erosion risk.² In a series of 8 patients who underwent salvage of RIP with a malleable prosthesis, 37.5% required a revision surgery due to erosion.² After patient counseling it may be reasonable to proceed to penoscrotal decompression after irrigation, aspiration, and phenylephrine fail. In the case that bilateral penoscrotal decompression fails, the urologist can proceed to dilate the corpora and place a prosthetic with lower complication risk or perform a distal shunt if the patient declines an implant.

4. Conclusion

Our experience with Morey's Penoscrotal Decompression technique was successful in the community setting and demonstrates that it is easily adopted in private practice. This procedure is more familiar to general urologists who do penoscrotal surgery and is an additional tool in the treatment of severe priapism. This technique also avoids the increased erosion risk of penile implantation after a distal shunt and may be less deleterious to erectile function than repeat aggressive tunneling as the corporal defect in this technique is closed primarily.

Consents

Informed consent was obtained from both patients prior to the creation of this case series.

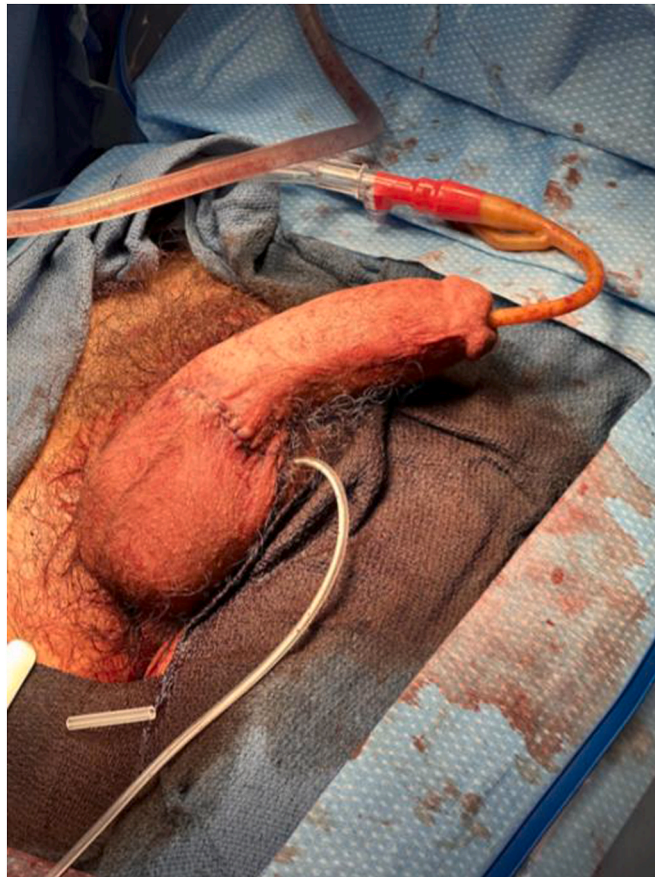


Fig. 3. Detumescence after penoscrotal decompression.

CRediT authorship contribution statement

Kole P. Akula: Writing – original draft, Writing – review & editing.
Matthias D. Hofer: Writing – review & editing.

References

1. Bivalacqua TJ, Allen BK, Brock GB, et al. The diagnosis and management of recurrent ischemic priapism, priapism in sickle cell patients, and non-ischemic priapism: an AUA/SMSNA guideline. *J Urol.* 2022;208(1):43–52.
2. Fuchs JS, Shakir N, McKibben MJ, et al. Penoscrotal decompression-promising new treatment paradigm for refractory ischemic priapism. *J Sex Med.* 2018 May;15(5):797–802. <https://doi.org/10.1016/j.jsxm.2018.02.010>. Epub 2018 Mar 14. PMID: 29550463.
3. Baumgarten AS, VanDyke ME, Yi YA, et al. Favourable multi-institutional experience with penoscrotal decompression for prolonged ischaemic priapism. *BJU Int.* 2020 Oct;126(4):441–446. <https://doi.org/10.1111/bju.15127>. Epub 2020 Jul 31. PMID: 32501654.
4. Khera M, Mulcahy J, Wen L, et al. Is there still a place for malleable penile implants in the United States? Wilson's Workshop #18. *Int J Impot Res.* 2023;35:82–89. <https://doi.org/10.1038/s41443-020-00376-6>.