

Phenylephrine for Management of Priapism

A Pharmacy Friday Pearl reviewing intracavernosal phenylephrine dosing, monitoring, and evidence for ischemic priapism management.



PACU Editorial
Pharmacy Friday Pearls



Legacy source conversion



6 min read



7 references



Introduction

The American Urological Association defines priapism as a persistent penile erection lasting at least 4 hours that may or may not be related to sexual stimulation.

Ischemic priapism is a medical emergency. After diagnosis, aspiration with or without irrigation is commonly attempted, and intracavernosal phenylephrine is used when aspiration or irrigation fails.

Key Points

- The source Pearl lists intracavernosal phenylephrine 100-500 mcg every 3-5 minutes over the course of 1 hour.
- Phenylephrine is favored by the AUA guideline panel because it is a pure alpha-adrenergic agonist with fewer cardiovascular effects than other sympathomimetics.
- The source notes no role for oral systemic therapy in treating ischemic priapism.

- Blood pressure and electrocardiogram monitoring are recommended in patients with high cardiovascular risk.

Pharmacology and Dosing

TOPIC	PRACTICAL DETAIL
Dose	100-500 mcg every 3-5 minutes over the course of 1 hour.
Preparation	Dilute phenylephrine with normal saline to a concentration of 100-500 mcg/mL.
Administration	Administer 1 mL of the diluted solution intracavernosally every 3-5 minutes until resolution or up to 1 hour before declaring treatment failure.
Pediatric or high-risk patients	Lower concentrations and smaller volumes may be appropriate for children or patients with severe cardiovascular disease.
Adverse effects and monitoring	Potential effects include acute hypertension, headache, reflex bradycardia, tachycardia, palpitations, and arrhythmia. Monitor blood pressure and ECG in high cardiovascular-risk patients.



CLINICAL PEARL

Shorter symptom duration is associated with lower phenylephrine requirements and higher nonsurgical success. Escalating duration should raise concern for treatment failure and need for urologic intervention.

Evidence Overview

SOURCE	DESIGN	PRACTICAL TAKEAWAY
Dittrich 1991	Retrospective review of 36 patients treated with phenylephrine 200-500 mcg.	All 36 patients responded successfully with no marked side effects reported.
Wen 2006	Case report of high-dose phenylephrine after lower-dose failure.	High cumulative dosing achieved detumescence without reported bradycardia or hypertension in the described cases.
Martin 2016	Retrospective review comparing phenylephrine and terbutaline.	Initial treatment success was higher with phenylephrine than terbutaline; no drug-related adverse events were documented.
Ridyard 2016	Retrospective review of 58 patients treated over 5 years.	Earlier presentation was associated with successful nonsurgical management and lower phenylephrine dosing.
Sidhu 2018	Retrospective chart review of 58 patients receiving 500 mcg/mL phenylephrine every 3-5 minutes.	Detumescence occurred at the bedside in 53 of 58 patients; no adverse events occurred.

BOTTOM LINE

Phenylephrine is the preferred intracavernosal sympathomimetic.

Low-dose phenylephrine can achieve detumescence in patients with shorter symptom duration.

Longer duration of priapism may require higher cumulative dosing and increases the likelihood of surgical intervention.

Phenylephrine was superior to terbutaline in the cited retrospective comparison, and reported adverse events were uncommon in the source evidence.



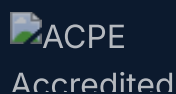
References

1. UpToDate. Retrieved February 15, 2021.
2. Montague DK, Jarow J, Broderick GA, et al. American Urological Association guideline on the management of priapism. *J Urol.* 2003;170:1318.
3. Dittrich A, Albrecht K, Bar-Moshe O, Vandendris M. Treatment of pharmacological priapism with phenylephrine. *J Urol.* 1991;146(2):323-324.
4. Wen CC, Munarriz R, McAuley I, Goldstein I, Traish A, Kim N. Management of ischemic priapism with high-dose intracavernosal phenylephrine. *J Sex Med.* 2006;3(5):918-922.
5. Martin C, Cocchio C. Effect of phenylephrine and terbutaline on ischemic priapism. *Am J Emerg Med.* 2016;34(2):222-224.
6. Ridyard DG, Phillips EA, Vincent W, Munarriz R. Use of high-dose phenylephrine in ischemic priapism. *J Sex Med.* 2016;13(11):1704-1707.
7. Sidhu AS, Wayne GF, Kim BJ, et al. Hemodynamic effects of intracavernosal phenylephrine. *J Sex Med.* 2018;15(7):990-996.

TAGS:

[Phenylephrine](#)[Priapism](#)[Emergency Medicine](#)[Urology](#)[Pharmacy Friday Pearls](#)

The only education platform built for pharmacists.



PRODUCTS

[PACULit](#)[PACU Core](#)[PACUPrep](#)[MPJE Prep](#)[FastTrack](#)[Pricing](#)

RESOURCES

[Blog](#)[Pharmacy Pearls](#)[Courses](#)[Free Resources](#)[Free Trial](#)

COMPANY

[About](#)[Instructors](#)[Institutions](#)[Contribute](#)[Contact](#)

LEGAL

[Terms & Conditions](#)[Privacy Policy](#)[FAQ](#)

