

Less of a Nightmare? A Case Report Comparing Doxazosin and Prazosin for PTSD

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Background

- Doxazosin and prazosin are α 1-antagonists that have evidence for the treatment of trauma-related nightmares^{1,2,3}
- To our knowledge, there are no reports of doxazosin use for this purpose in the general hospital setting
- One significant advantage of using doxazosin over prazosin in the medically ill is its relatively lower propensity to affect blood pressure⁴
- We present the case of a patient on our consultation-liaison (C-L) service who, due to supply limitations, received doxazosin in place of prazosin for post traumatic stress disorder (PTSD)-related nightmares
- The patient was previously started on prazosin in the same setting, allowing for the first known comparison of these medications in the C-L setting

Objectives

- To examine a C-L case in which doxazosin functioned as an alternative medication for prazosin in an acutely medically ill patient for the treatment of PTSD-related nightmares
- To explore the potential advantages and use cases for doxazosin

Case

- M.M. is a 43-year-old female with a medical history of pancreatitis, coronary artery disease, and respiratory arrest in setting of opioid use, psychiatric history of alcohol use disorder (AUD), bipolar disorder, and PTSD, multiple prior psychiatric hospitalizations, prior inpatient rehabilitation treatments, who was medically admitted for pancreatitis and was seen by the C-L service on multiple occasions across one year for AUD and mood dysregulation
- She was started on prazosin for nightmares which she consistently reported was helpful on several admissions, which was transitioned to doxazosin



Admission Course Overviews

- 2/2021:
- Admitted for: acute on chronic pancreatitis
 - Started on prazosin 1mg QHS to target nightmares
 - PTSD symptoms reported in psych ROS: hypervigilance, nightmares, anxiety
- 3/2021:
- Admitted for: acute on chronic pancreatitis
 - Prazosin 1mg QHS to 2mg QHS to target nightmares (discharged on 1mg QHS)
 - PTSD symptoms reported in psych ROS: intrusive memories, nightmares
- 7/2021:
- Admitted for: acute on chronic pancreatitis
 - Prazosin 1mg QHS to 2mg QHS to target nightmares (discharged on 2mg QHS)
 - PTSD symptoms reported in psych ROS: Insomnia, nightmares
- 11/2021:
- Admitted for: acute on chronic pancreatitis
 - Prazosin 2mg replaced with doxazosin 4mg due to hospital prazosin shortage
 - PTSD symptoms reported during psych ROS: None

Drug Properties

Property	Prazosin	Doxazosin
Mechanism	Crosses blood-brain barrier (highly lipophilic) antagonizes α 1 receptors in the CNS	Crosses blood-brain barrier (less lipophilic); antagonizes α 1 receptors in the CNS
Half life	2 to 3 hours; duration of action of 6 to 10 hours → requires dosing 2 to 4 times a day	16 to 30 hours; duration of action >24 hours → can be taken once daily with no extra daytime dosing required
Dose Example	1 mg in the morning, 1 mg at noon or early afternoon, and 5 mg at bedtime	9 mg once nightly
Cost	similar	similar
Blood pressure effects	Decreases blood pressure in hypertensive and normotensive patients	Blood pressure neutral in normotensive patients; lower risk of 1st-dose postural hypotension compared with prazosin
AUD Benefits	Not demonstrated	Demonstrated ⁵
Use in BPH, urinary retention	No	Yes

Discussion

- Previous case reports and reviews demonstrate the efficacy of doxazosin for PTSD-related nightmares in a clinic population^{1,2}
- Findings suggest that doxazosin is an efficacious and tolerable alternative to prazosin for patients suffering from post-traumatic nightmares in the C-L setting
- This case supports literature that doxazosin is blood pressure neutral (see figure 1)
- In addition to potential ongoing supply chain issues that may impact prazosin availability, doxazosin has several inherent properties which may render it preferable to prazosin for the C-L population
- These include a longer half life, lesser blood pressure effects, and therapeutic indications for AUD, benign prostatic hypertrophy, and urinary retention⁴

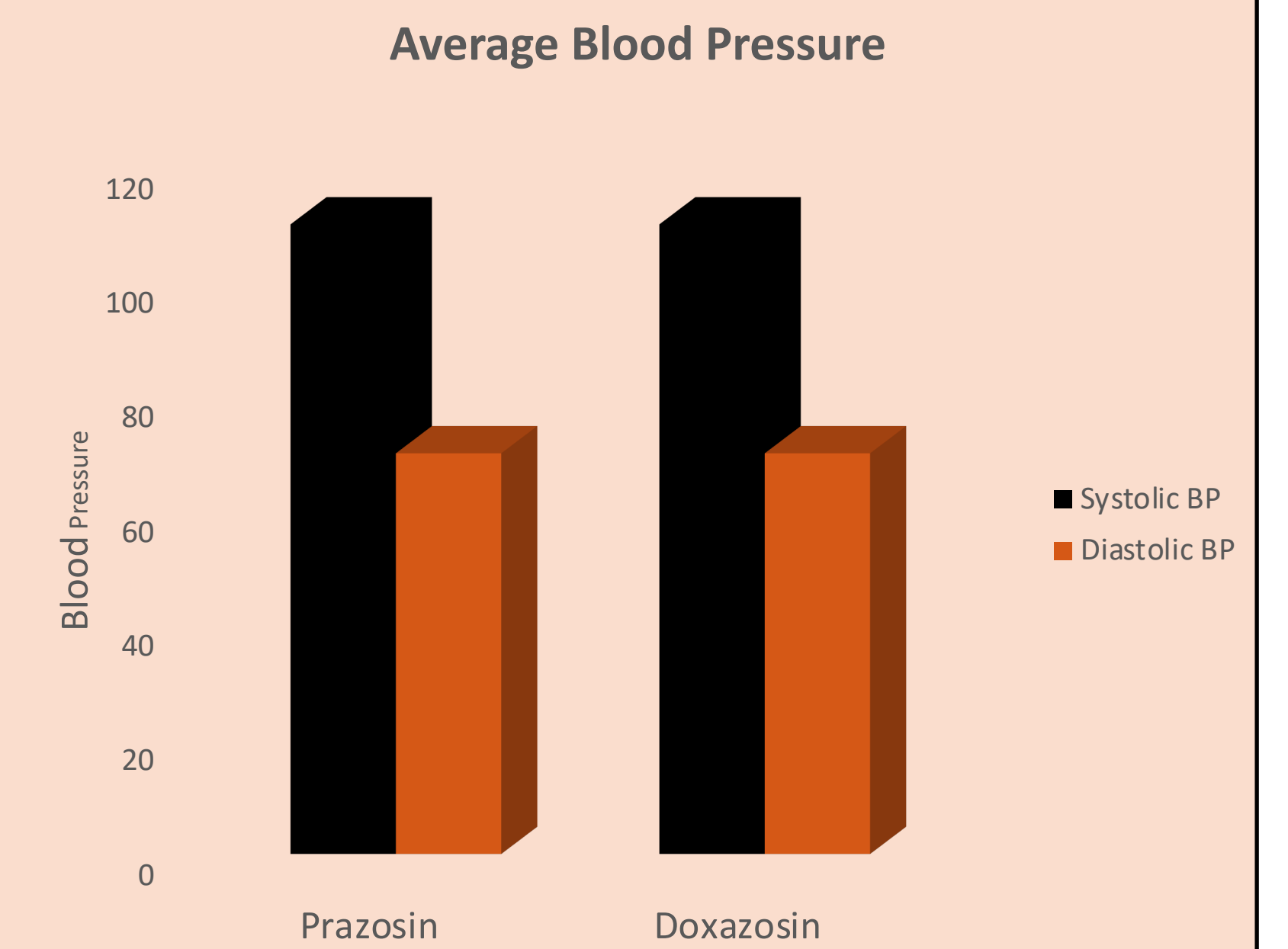


Figure 1: Compares average of patient's recorded blood pressure on prazosin (left) and doxazosin (right). No difference between blood average blood pressure observed.

Conclusion

- Limited data exists on the use of prazosin and doxazosin in the C-L setting, and on the use of doxazosin for nightmares in any setting.
- Further clinical research is indicated, as these medications may be underutilized treatment options for C-L patients who may be at increased risk of experiencing trauma-related nightmares.
- Doxazosin may be an underutilized alternative to prazosin in the C-L and other settings

References

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