

MP78-17: Risk Factors for Reoccurrence of Priapism After Initial Priapism Treatment

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Introduction

Ischemic priapism is a urologic emergency and expedient treatment is believed to be of paramount importance for preservation of erectile tissue. Treatment for ischemic priapism consists of a stepwise algorithm starting with corporal irrigation followed by injection of a sympathomimetic agent. Patients who do not respond to initial management require a surgical shunt. Data on the occurrence of repeat episodes of priapism are limited.

Objectives

- Identify risk factors associated with repeat occurrence of priapism.
- Determine whether patients with second occurrence of priapism seek medical attention more quickly than on initial occurrence.

Materials & Methods

We identified all patients presenting to our institution with ischemic priapism from January 2010 to December 2018.

We extracted information including time to presentation, treatments given, patient demographics, priapism etiologies, and priapism duration.

We used multivariate analysis to identify risk factors for repeat priapism.

Variables in our model included:

- Age
- Race
- Prior priapism
- Time to presentation
- Priapism from prescribed intracavernosal injectable
- Priapism from recreational intracavernosal injectable
- HIV status

Results

We identified a total of 163 ischemic priapism encounters from 142 unique patients with 21 repeat priapism encounters in the 9-year period (figure 1).

Of these, 102 (71.8%) patients underwent corporal irrigation and phenylephrine injection, of which 19 (18.6%) had a second priapism.

Ultimately 22 patients (15.5%) required a shunt after corporal irrigation and/or phenylephrine injection, none of which had a second priapism.

21 patients (14.7%) required no interventional at all for their priapism to detumescence, none of whom had a second priapism.

74 patients (52.1%) admitted to recreational use of erectile dysfunction (ED) medications prior to their priapism, 12 of whom (16.2%) had a second priapism.

Of these 12 second priapisms, eight were attributed to repeat recreational use of ED medications.

On univariate analysis, corporal irrigation of the initial priapism was associated with occurrence of a second priapism and shunting of initial priapism was negatively associated with occurrence of a second priapism.

On multivariate analysis, only age was associated with increased likelihood of a second priapism (table 1).

The mean time to presentation for first and second priapism was 15.3 and 10.7 hours respectively (p=0.029).

Conclusions

Patients with a second priapism are more likely to seek medical attention sooner than those presenting with a first-time priapism suggesting that patients learned from their initial experience.

Patients who received corporal irrigation and phenylephrine injection for treatment of their initial priapism were more likely to present for a second priapism than those who did not.

Patients who required a shunt for their initial priapism were less likely to present for a second priapism than those who did not, suggesting that patients who are irrigated not only retain erectile function but may continue practices leading to priapism and that those who were shunted either changed their erectile habits or no longer have erectile function.

None of the patients who require no treatment for their priapism returned with a second priapism, suggesting a milder presentation.

Conversely none of the patients who required shunting returned with a second priapism, suggesting that they may no longer have erectile function.

Limitations

Retrospective nature of data collection.

Data limited only to Cedars-Sinai presentations for priapism; subsequent or previous priapism not treated at Cedars-Sinai not captured.

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Figure 1: Reoccurrence of Priapism

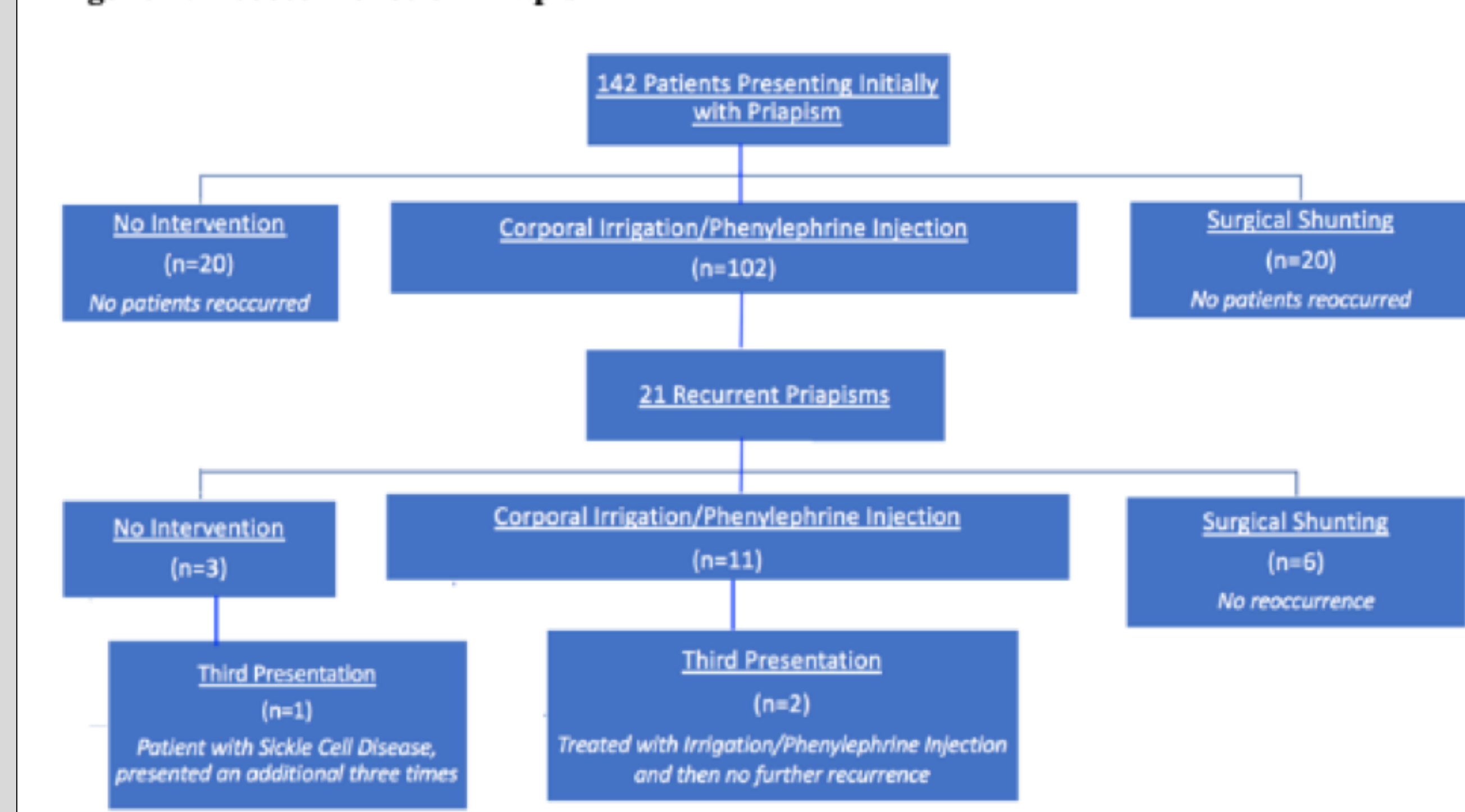


Table 1: Multivariate Analysis for Probability of Repeat Priapism Occurrence

Variable	Odds Ratio	95% CI	P
Patient Age	0.05	0.026 – 2.01	0.04
Use of All Intracavernosal Injectables (ICI)	-0.23	-0.31 – 0.75	0.76
Use of Recreational ICI	0.45	0.67 – 0.68	0.5
Corporal Irrigation*	1.13	0.87 – 1.3	0.19
Time of Presentation*	-0.17	-0.32 – 0.55	0.75
Use of Illicit Drugs	-0.17	-0.14 – 1.17	0.88
HIV Status	0.28	0.6 – 0.46	0.64

Variables included age, race, history of prior priapism, priapism duration, priapism due to all intracavernosal injectable use, priapism from “recreational” intracavernosal injectable, corporal irrigation, time of presentation, volume of phenylephrine injected, recreational drug use, and HIV status.
 *Significant on univariate analysis