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AUA VIRTUAL EXPERIENCE



Predictive factors to determine treatment course of patients with first-time priapism PD20-09

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Background

- Ischemic priapism
 - Decreased intracavernous blood flow
 - Marked by painful rigidity of the corpora cavernosa
 - Abnormal cavernous blood gases with hypoxia and acidosis
- AUA Guideline treatment algorithm





Background





Objective

Establish predictive factors of patients who failed phenylephrine injection and ultimately required corporoglandular shunt during first-time ischemic priapism episodes



Methods

- Performed retrospective review over the past ten years (2009 2019) of patients with first-time episodes of ischemic priapism
- Variables assessed included: etiology, age, duration of erection prior to evaluation, total amount of phenylephrine injected, and use of corporal irrigation
- A receiver operating characteristic (ROC) curve was performed to determine if amount of phenylephrine and duration of erection could be utilized as predictive tests



Results

Table 1: Variables assessed among patients with first-time priapism

	Non-shunt (n = 123)	Shunt (n = 24)	p - value
Age, years	41.5	43.9	0.38
Etiology:			0.81
A. Idiopathic, N (%)	27 (22.1%)	7 (29.2%)	
B. Sickle cell, N (%)	20 (16.2%)	4 (16.7%)	
C. Medications, N (%)	73 (59.3%)	12 (50.0%)	
D. Cocaine, N (%)	3 (2.4%)	1 (4.1%)	
Mean amount of phenylephrine, mcg (± SD)	655.7 (± 488.5)	1161.9 (± 1024.9)	< 0.05
Irrigation performed, N (%)	73 (59.3%)	22 (91.7%)	< 0.05
Urology performed phenylephrine injection, N (%)	44 (35.8%)	19 (79.2%)	< 0.05



Figure 1: ROC curve of total phenylephrine injected



- Area under the curve: 0.72
- Optimal: 950 mcg
 - Sensitivity: 62%
 - Specificity: 74%



Figure 2: ROC curve duration of erection prior to intervention



- Area under the curve: 0.90
- Optimal: 15.5 hours prior to presentation
 - Sensitivity: 88%
 - Specificity: 86%



Conclusions

- Our study suggests that etiology of priapism and the age of the patient do not correlate with need for shunt procedure
- Patients who require greater than 950 mcg of total phenylephrine injected or present with erections lasting greater than 15.5 hours are significantly more likely to require corporoglandular shunt and should be counseled appropriately as such