Ensuring Safety and Feasibility: Same-Day Urological Prosthetic Surgeries for the Treatment of Incontinence and Erectile Dysfunction

Abstract #385

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Introduction

The COVID-19 pandemic followed by restrictions in elective surgeries made patient access to elective surgical procedures nearly impossible.

Urologic prosthetic surgeries such as insertions of artificial urinary sphincters (AUS), penile prostheses (PP), and urethral slings (US) shifted from inpatient to ambulatory service.

Day surgery can substantially lower direct costs associated with inpatient care, due to hospitalization and staffing, and indirect costs for patients.

While previous studies have shown that day surgeries can be safe, there is exceedingly limited literature exploring the safety and feasibility of *urological prostheses insertion* on an ambulatory basis.

Aims of study

- to analyze the outcomes of same-day urological device surgeries,
- to grade post-surgical complications using the Clavien-Dindo classification,
- to compare 30-day complication rates between DS and Inpatient surgeries,
- to determine whether ambulatory setting is safe and feasible for urological prosthetic surgeries.

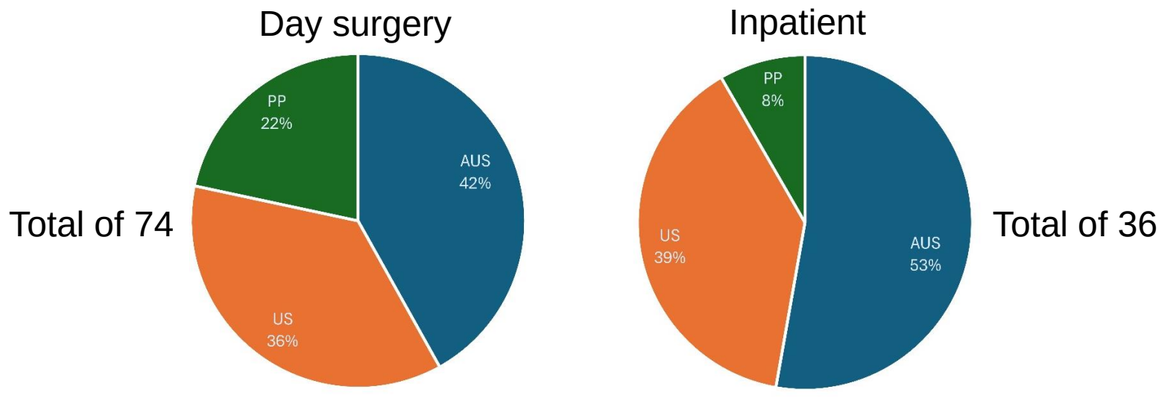
Study design

We conducted a **retrospective review** of all ambulatory and inpatient US, AUS, and PP insertions performed between January 2019 and June 2023. The resulting **database** comprises patient baseline demographics, comorbidities, indications and types of surgery, as well as **30-day postoperative complications**, classified according to the Clavien-Dindo scale. We **compared complication rates** of DS and Inpatient surgeries.

Statistical analysis was performed using R statistical software and Microsoft Excel to identify statistical differences between rates of postoperative complications after DS and Inpatient urological prosthetic surgery. The p-values < 0.05 were considered to be significant.

Results and interpretation

Number and the type of same-day and Inpatient urological surgeries.



Number (N) and rate (%) of postoperative complications in each cohort based on the type of surgery.

	Day surgery						Inpatient surgery					
	AUS		US		PP		AUS		US		PP	
Clavien-Dindo Classification	N	%	N	%	N	%	N	%	N	%	N	%
Nil	25	*80.6*	24	*88.9*	15	*93.8*	15	*78.9*	7	*50*	3	*100*
Grade I	1	*3.2*	2	*7.4*			1	*5.3*	5	*35.7*		
Grade II	4	*12.9*	1	*3.7*			2	*10.5*	2	*14.3*		
Grade IIIa	1	*3.2*										
Grade IIIb					1	*6.3*	1	*5.3*				
Overall complications	6	*19.3*	3	*11.1*	1	*6.2*	4	*21.1*	7	*50.0*	0	*0.0*

- ✓ DS vs Inpatient US insertion complications, 11.1% vs. 50%, p=0.006.
- ✓ DS vs Inpatient AUS insertion complications, 19.3% vs. 21.1%, p=0.8.
- ✓ DS vs Inpatient PP insertion complications, 6.2% vs. 0.0%, p=0.66.
- ✓ Only two admissions in the DS cohort within 30 days (26 and 8 days after the surgery).

Conclusions

- ❖ Complication rates in the DS cohort are similar to or significantly lower than those in the Inpatient cohort.
- ❖ Outpatient implantation of AUS, US, and PP can be safe and feasible.
- ❖ The novel approach can be economically beneficial and lead to a quicker recovery and more patient satisfaction.

Given the novelty and relatively limited scale of this study, further research involving larger scale and extended duration trials is needed to assess the long-term complication rates of DS, its impact on patient satisfaction, and cost-effectiveness.

References

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