

Same-day catheter-free discharge versus overnight observation after artificial urinary sphincter surgery: a systematic review and meta-analysis



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Aim

To compare postoperative outcomes of **same-day catheter-free discharge (SDS)** vs. **overnight observation (OBS)** following artificial urinary sphincter (AUS) implantation.

Methods

- **Design:** Systematic review + meta-analysis
- **Sources:** PubMed, Scopus, Cochrane, Google Scholar, ClinicalTrials.gov (up to April 2025)
- **Studies:** 6 studies (n = 2424; 4 included in meta-analysis, n = 1085)
- **Primary outcomes:**
 - Postoperative urinary retention
 - Emergency department (ED) visits within 90 days
- **Secondary outcomes:**
 - Suprapubic catheter (SPC) placement
 - Postoperative complications

Results

- **Urinary retention:** no significant difference (RR = 1.44; 95% CI 0.81–2.56; p = 0.21)
- **ED visits (90 days):** no significant difference (RR = 0.91; 95% CI 0.59–1.42; p = 0.69)
- **SPC placement:** significantly lower with SDS (RR = 0.28; 95% CI 0.09–0.81; p = 0.02)
- **Risk of bias:** moderate to serious in most included studies

Interpretation

- SDS is not associated with increased urinary retention or ED visits.
- SDS shows a reduced need for SPC placement, likely reflecting earlier voiding trials and enhanced recovery.
- Evidence is promising but limited by retrospective design and heterogeneity.

Conclusion

- Same-day catheter-free discharge after AUS implantation is a safe alternative to overnight observation in selected patients.
- May reduce catheter-related morbidity and optimize perioperative care pathways.
- Future RCTs are needed to confirm findings and standardize discharge protocols.

Figure 1. Urinary retention after catheter removal in catheter-free and overnight observation

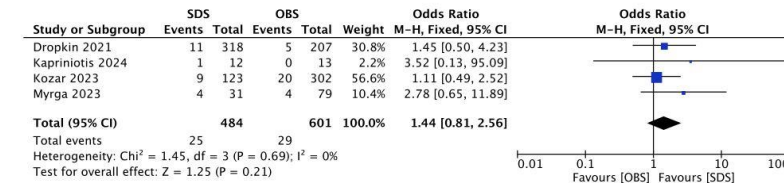


Figure 2. Emergency department visit after 90 days in catheter-free and overnight observation

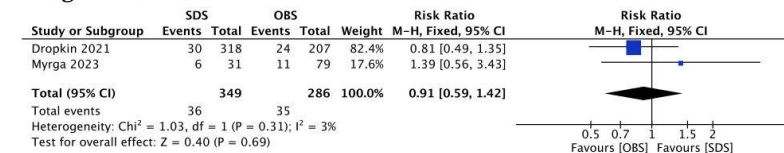


Figure 3. Postoperative suprapubic catheter placement in catheter-free and overnight observation

