



SLING SURGICAL TREATMENT FOR URINARY INCONTINENCE FOLLOWING RADICAL PROSTATECTOMY: A SYSTEMATIC REVIEW



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INTRODUCTION

Urinary incontinence following radical prostatectomy is a frequent and debilitating complication, often necessitating conservative and surgical interventions to restore urinary continence and preserve renal function. Urinary incontinence can severely impact patients' well-being, causing physical discomfort and emotional distress, alongside hindering daily activities and social interactions. Among the various surgical approaches, sling procedures have gained notoriety for their efficacy and safety in managing post-prostatectomy urinary incontinence, while being a more affordable alternative..

METHODS

A systematic search was conducted in PubMed, Embase, and Cochrane Library databases using relevant MeSH terms and keywords, including "radical prostatectomy," "sling surgery," and "urinary incontinence." Trials and observational studies published between January 2010 and December 2023 were included. Studies reporting on sling procedures for urinary tract injuries following radical prostatectomy were eligible for inclusion. Statistical analysis was performed to calculate pooled success rates and complication rates using a random-effects model. The data was calculated and pooled using the software STATA version 12.0 and R software version 3.6.0

RESULTS

The initial search yielded 239 articles. Ultimately, 8 studies met the inclusion criteria and were included in the final analysis. Pooled analysis demonstrated an overall success rate of 68.9% (95% CI: 58.3%–77.5%) for sling procedures in managing post-prostatectomy urinary incontinence. Common sling materials utilized included synthetic mid-urethral slings and autologous fascial slings. Complication rates varied, with the most frequent complications being urethral erosion (12.5%) and mechanical failures (9.8%).

CONCLUSION

Urinary incontinence is potentially one of the most debilitating sequelae of radical prostatectomy. Sling procedures represent a viable surgical alternative for managing urinary tract injuries following radical prostatectomy, offering favorable success rates (68.9%) in restoring urinary continence. Both synthetic and autologous sling materials have demonstrated effectiveness in this setting. However, clinicians must remain vigilant for potential complications such as sling erosion and urinary retention. Further research is warranted to optimize patient selection, refine surgical techniques, and minimize complications associated with sling procedures in this patient population.