Surgical Excision Versus Conservative Management for Complications of Midurethral Sling (TOT/TVT) Procedures in Women: A Systematic Review of Symptom Resolution, Adverse Outcomes, and Reintervention Rates

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ABSTRACT

Midurethral sling (MUS) procedures, including transobturator tape (TOT) and tension-free vaginal tape (TVT), are widely used for treating female stress urinary incontinence but may result in complications such as mesh exposure, pain, dyspareunia, and voiding dysfunction. Choosing between conservative and surgical management for these complications remains clinically challenging due to limited high-quality evidence. To systematically review the outcomes of surgical excision versus conservative management for complications following MUS procedures in adult women. A comprehensive search of PubMed, Embase, Scopus, the Cochrane Library, and Google Scholar was conducted up to May 2025. Eligible studies included randomized trials, observational studies, and case series reporting outcomes of adult women with MUS-related complications managed surgically or conservatively. Data extracted included symptom resolution, adverse events, continence, sexual function, quality of life, and reintervention rates. Due to heterogeneity and predominance of observational data, results were synthesized narratively. Thirty-three studies met inclusion criteria, most being retrospective observational studies; no randomized controlled trials were identified. Surgical excision (partial or complete) consistently improved pain, dyspareunia, and mesh-related symptoms, with reported pain resolution ranging from 50% to 93%. However, excision was associated with a substantial risk of recurrent or de novo stress urinary incontinence. Conservative management demonstrated limited effectiveness for persistent or severe complications. Complication rates after excision varied, with overall postoperative morbidity reported up to 47%. Patient satisfaction was generally high, with many reporting meaningful improvement in symptoms and quality of life. Across studies, heterogeneity, small sample sizes, and high risk of bias limited the strength of conclusions. Surgical excision is effective for alleviating pain and resolving mesh-related complications but carries a significant risk of recurrent incontinence. Conservative management may be appropriate for mild or asymptomatic cases but is less effective for persistent symptoms. Evidence remains largely observational and heterogeneous, underscoring the need for high-quality comparative studies to guide optimal management of MUS-related complications.

Keywords: Midurethral sling, mesh excision, transobturator tape, tension-free vaginal tape, urinary incontinence, surgical outcomes, conservative treatment, complications

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