Autologous mid-urethral fascial sling as a primary surgery for women with stress urinary incontinence

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Study design, materials and methods

Women undergoing mid-urethral AFS for SUI at a tertiary referral center between February 2021 and March 2025 were retrospectively reviewed. All patients had received pelvic floor muscle training for at least 6 weeks and/or medical treatment prior to surgery. Informed discussions were held regarding available surgical options, including synthetic slings, Burch colposuspension, and urethral bulking agents. Women who chose AFS were included.

Autologous fascia was harvested and placed at the mid-urethra via the retropubic route using a standardized surgical technique. Data on demographics, surgical details, postoperative outcomes, and complications were collected.

Results

Sixty patients were included, with a median age of 54 years (range: 39–77) and a median follow-up of 16 months (range: 1–49). AFS was the primary procedure in 57 patients (89.4%). Complete dryness was achieved in 47 patients (78.3%). Patient Global Impression (PGI) of improvement at 6 weeks averaged 77.0% (±27.1). The median hospital stay was 2 days.

The overall complication rate was 20% (12/60). Complications included mechanical sling failure (3.3%), temporary intermittent self-catheterization (8.3%), wound complications at the harvest site (8.3%), sling release (3.3%), and de novo urgency requiring botulinum toxin injection (3.3%).

Interpretation of results

This study demonstrates that autologous mid-urethral fascial sling (AFS) surgery is an effective and acceptable treatment option for women with stress urinary incontinence who prefer to avoid synthetic mesh. A high rate of complete continence (78.3%) and substantial patient-reported improvement support the efficacy of the procedure. While the complication rate was moderate (20%), most adverse events were manageable and did not lead to long-term morbidity. Temporary voiding dysfunction and wound complications were the most common issues, underscoring the importance of appropriate patient counseling and careful surgical technique. The low rates of sling release and mechanical failure indicate good technical durability.