

MINIMALLY INVASIVE SALVAGE INJECTION FOR STRESS URINARY INCONTINENCE

Hypothesis / aims of study

To our knowledge, there are limited data reporting the use of transurethral injection (TUI) as a salvage procedure in patients who have undergone prior surgery for stress urinary incontinence (SUI). The technique (Salvage TUI) provides a minimally invasive method to improve incontinence in complex patients. We report our clinical experience with TUI as a salvage procedure for SUI.

Study design, materials and methods

An observational, questionnaire-based retrospective study of patient reported outcomes was conducted to assess satisfaction with Salvage TUI using Calcium Hydroxylapatite (Coaptite®, Boston Scientific) after failed anti-incontinence procedure. TUI had been offered to patients with residual stress incontinence after failed anti-incontinence surgery, the majority of whom had urethral mobility less than 35 degrees on physical exam. Calcium hydroxylapatite was used secondary to the removal of collagen and ethylene vinyl alcohol (Tegress) from the market; silicone (Macroplastique) was not used for neutral reasons. Procedures performed between August 2005 and September 2013 were identified using CPT codes. Questionnaires were distributed in September 2013. All patients were asked to complete 4 validated questionnaires including a single global response assessment question (GRA, primary outcome), the Urogenital Distress Inventory short form (UDI-6), and the International Consultation on Incontinence Questionnaire-Female Lower Urinary Tract Symptoms (ICIQ-FLUTS), a visual analog scale (VAS) for improvement as well as a structured questionnaire asking the about complications and if the patient would repeat the procedure in retrospect. Baseline information from the initial patient visit and the visit prior to TUI was collected from a retrospective chart review including age, diagnosis, presence or absence of urethral hypermobility, number and type of prior surgical interventions for stress incontinence, number and dates of calcium hydroxylapatite injections. Secondary outcomes included the patient-reported percent improvement, adverse events, if the patient would repeat the procedure, the UDI-6 and the ICIQ-FLUTS.

Results

Twenty-four patients were identified who had undergone salvage transurethral injection of calcium hydroxylapatite after prior failed anti-incontinence procedures. Seventeen patients (71%) responded to the questionnaire. The seventeen patients underwent a total of 33 injections. Results of the GRA showed that 76% of patients reported improvement in their overall condition, 17.6% reported their symptoms were worse and 5.8% reported no change. Regarding our secondary outcomes, patient-reported complications included post-op UTI in 2/17 (11%), temporary urinary retention 3/17 (17%) and severe bladder cramping in 1/17 (5.8%). Sixty-nine percent of patients reported feeling >75% improvement in their symptoms. There was a mean improvement of 75% on the VAS and 30% reported that their symptoms were 100% improved. Eighty-two percent of patients indicated they would, in retrospect, repeat TUI.

Interpretation of results

Surgical options for patients who have failed prior anti-SUI procedures, in some cases multiple procedures, can pose a challenge for the treating surgeon. The prospect of another major surgery can be frustrating for the patient. Salvage transurethral injection of bulking agents offers a minimally invasive option with low morbidity. In our experience with transurethral injection of calcium hydroxylapatite (CaHA) as a salvage technique, 76% of patients reported improvement in their symptoms and 30% of patients reported 100% resolution of their stress incontinence. Given these findings, transurethral injection of CaHA may be presented as a minimally invasive option when counseling patients regarding salvage for patients with refractory SUI.

Concluding message

Transurethral injection should be considered as a minimally invasive option in patients who have failed previous anti-incontinence surgery. Prospective evaluation especially in a randomized trial would further characterize the results of this intervention.

Disclosures

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