

## CHARACTERISTICS OF PATIENTS SUCCESSFULLY TREATED WITH URETHRAL BULKING AGENT

### Hypothesis / aims of study

To determine the characteristics of women who experience improved continence following urethral bulking procedure.

### Study design, materials and methods

We performed a retrospective cross-sectional study of women who underwent urethral bulking from October 2010 to June 2014. Women <18 years or with a prior bulking procedure were excluded. Clinic notes 6 weeks to 4 months post-procedure evaluated patient improvement. Bulking success was defined as subjective cure or improvement of leakage per patient's report, decreased pad usage, or no further surgical therapy. Patient and procedural data were collected to identify characteristics for bulking success. Pre and post-procedure bother was documented via the Pelvic Floor Distress Inventory. Summary statistics were calculated. Categorical variables were analysed by chi-square test, and continuous variables were analysed by ANOVA. Logistic regression was used to predict outcome of bulking treatment.

### Results

A total of 115 women met inclusion criteria. A majority of women were white, parous, non-smokers, with a history of prior-incontinence surgery. Mean age was 63.6 years ( $\pm 14.5$ ) and mean BMI was 30.0 kg/m<sup>2</sup> ( $\pm 7.1$ ). Sixty four (59%) patients exhibited improvement in continence after the bulking procedure. Non-smokers ( $p=0.006$ ) and patients with a history of hypertension ( $p=0.024$ ) were more likely on univariate analysis to exhibit treatment success not accounting for other patient characteristics. Age and BMI did not significantly impact the success of bulking after urethral bulking. A strong logistic regression model was created to include significant predictors of bulking success ( $c=0.8$ ). The odds of bulking success were 16.35 times higher for non-smokers versus smokers ( $p=0.012$ , 95% CI [1.85-144.73]). The odds of success for those with hypertension were 5.20 times higher than those without hypertension ( $p=0.0478$ , 95% CI [1.25-74.57]) and 2.70 times higher for those taking anti-cholinergic medications compared to those who do not ( $p=0.0456$ , 95% CI [1.02-7.15]). Finally, the odds of bulking success were 9.65 times higher for those without an autoimmune disease relative to those with an autoimmune disease ( $p=0.0297$ , 95% CI [1.25-74.57]).

### Interpretation of results

In our study non-smokers had the highest odds of achieving urethral bulking success. In this population, hypertension was a predictor for success. This study provides insight into characteristics that influence successful treatment from urethral bulking. Examination of urethral bulking in a prospective design with a larger sample would help confirm these findings.

### Concluding message

Factors improving stress urinary incontinence following urethral bulking in this urogynecology population are non-smoking status, hypertension, current anti-cholinergic use, and no history of auto-immune disease.

### Disclosures

**Funding:** None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** University of Oklahoma Institutional Review Board for the Protection of Human subjects **Helsinki:** Yes **Informed Consent:** No