

## FACTORS CORRELATED WITH URGE URINARY INCONTINENCE FOLLOWING SURGERY FOR STRESS INCONTINENCE

### Hypothesis / aims of study

To evaluate factors possibly associated with urge urinary incontinence (UUI) following surgery for stress urinary incontinence (SUI).

### Study design, materials and methods

A cohort of 440 women who underwent surgery (retropubic urethropexy, pubovaginal sling or tension free vaginal tape placement) for SUI between 1993 and 2003 completed multiple health related quality of life questionnaires in an IRB approved cross-sectional study (a response rate of 66%). These included the Incontinence Symptom Index (ISI), a validated 10 item questionnaire eliciting symptoms of stress and urge incontinence and bother, and the Patient Health Questionnaire (PHQ) a validated instrument screening for depression. Generalized linear models were used to evaluate correlations between the severity of urinary incontinence and factors such as socioeconomic status, medical, surgical, gynecologic, and psychiatric histories.

### Results

Mean age was 55 + 12.5 years. Median follow-up was 3.2 + 2.5 years (range 1-10 years). Following surgery, 35% of patients complained that at least once per day they had significant episodes of UUI. Age adjusted urinary incontinence symptom severity increased with duration of follow-up ( $p=0.0069$ ) and those with the longest follow up (6-10 years) had the highest symptom scores. The severity of depression was also found to be associated with increasing UUI ( $p=0.0014$ ). Marginally associated with UUI were age ( $p=0.06$ ) and a history of irritable bowel syndrome ( $p=0.06$ ). Factors which did not correlate with UUI included a history of vaginal delivery, cesarean section, hysterectomy, use of hormone replacement therapy, number of incontinence operations, cigarette use, alcohol use, race, body mass index, and level of education and income.

### Interpretation of results

	FOLLOW UP PERIOD				DEPRESSION SEVERITY			
	1 year	2-3 years	4-5 years	6-10 years	No depression	Mild	Moderate	Severe
UUI	5.0	7.1	6.6	8.1	5.3	6.4	6.8	8.8

### Concluding message

Urge urinary incontinence is not uncommon following surgery for stress incontinence. Severity of UUI is associated increasing length of follow up and severity of depression. Our finding that depression is associated with urge incontinence does not imply causality but may present a potential target for treatment of postoperative urge urinary incontinence.