

URODYNAMICS BEFORE STRESS INCONTINENCE SURGERY-A SYSTEMATIC REVIEW AND META-ANALYSIS

Hypothesis / aims of study

Although urodynamic tests are widely used in the investigation of stress urinary incontinence (SUI), their place in the diagnostic work-up and selection of surgical treatment remains controversial. The measurement of changes in patient-reported symptoms and changes in quality of life are now the norm for measuring success of the incontinence treatments. A recent survey of urologists and urogynaecologists concluded that 89% currently arrange UDS for the majority of women with SUI or stress predominant mixed urinary incontinence (MUI). We aimed to collate the evidence on the outcome of stress urinary incontinence (SUI) surgery based on urodynamic diagnosis versus history and examination alone, in women with SUI or stress predominant mixed urinary incontinence and no voiding dysfunction.

Study design, materials and methods

We searched Cochrane, MEDLINE, EMBASE, CINAHL, LILACS, meta Register of Controlled trials (*m* RCT) and Google Scholar databases from inception until 03/2013. We included randomised controlled trials (RCT) comparing clinical outcomes in women who were investigated by UDS versus women who underwent SUI surgery based on office evaluation alone. Two independent reviewers assessed trial quality and extracted the data. All the information was analysed using Rev Man 5.2 software.

Results

Out of the 388 articles identified in the search, 4 RCTs met our inclusion criteria; out of which 2 were published as full manuscripts, one as an abstract and the results from the 4th study are as yet unpublished. The women were randomised to either baseline office evaluation (n=382) or preoperative urodynamics (n=345). There was no statistical difference in the subjective surgical outcome in the two groups in both the studies [odds ratio 0.81(95%Confidence Interval (CI) 0.49-1.34)] Objective cure rate in the form of negative stress test at 12-49 months follow up was also found to be similar in both groups [OR 0.89(95% CI of 0.50-1.60)]. During the one year follow up, voiding dysfunction was found to be similar in the two groups [OR 0.62(95%CI of 0.21-1.87)]. There was a trend towards increased new or continued treatment for urgency in the office evaluation group but it was not statistically significant [OR 2.73 (95% CI of 0.73-10.17)]

Interpretation of results

The collated evidence from the RCTs published to date confirms that there is no difference in subjective or objective cure/improvement or indeed the postoperative complications (voiding dysfunction, urgency treatment) in the Office evaluation group compared to preoperative UDS group. Thus, we can safely concur the non-inferiority of office evaluation to UDS in the investigative pathway of SUI.

Omission of UDS in the group of women complaining of stress predominant mixed incontinence may not reduce the success rate as 60% of the women with DO alongside USI reported cure of symptoms with mid-urethral tapes. Besides, the omission of preoperative urodynamics reduces the number of UDS procedures performed by 29% leading to potential savings.

Concluding message

In patients with pure SUI and stress predominant mixed urinary incontinence, preoperative urodynamic studies do not influence the surgical outcome of patients undergoing primary stress urinary incontinence surgery. The evidence reinforces the current NICE guidance in that UDS is not necessary in the investigative algorithm of pure SUI or stress predominant MUI.

Figure 1 Subjective cure rate (12-48 months)

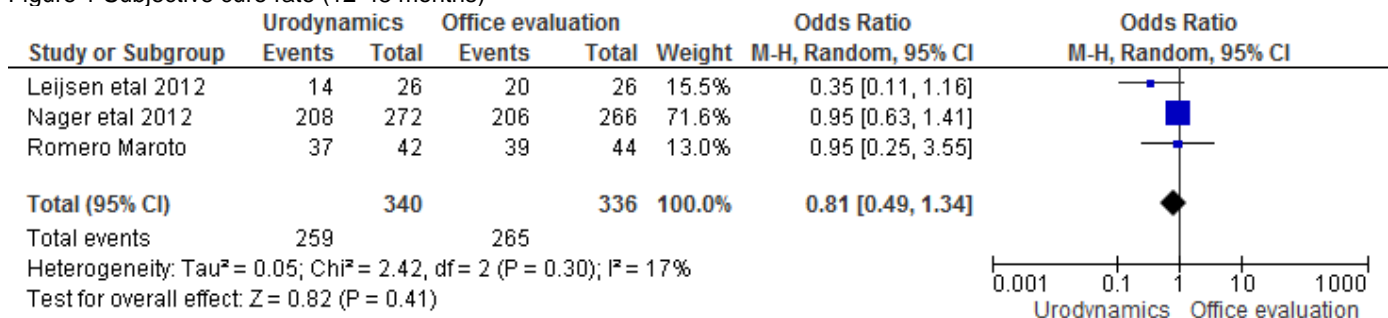
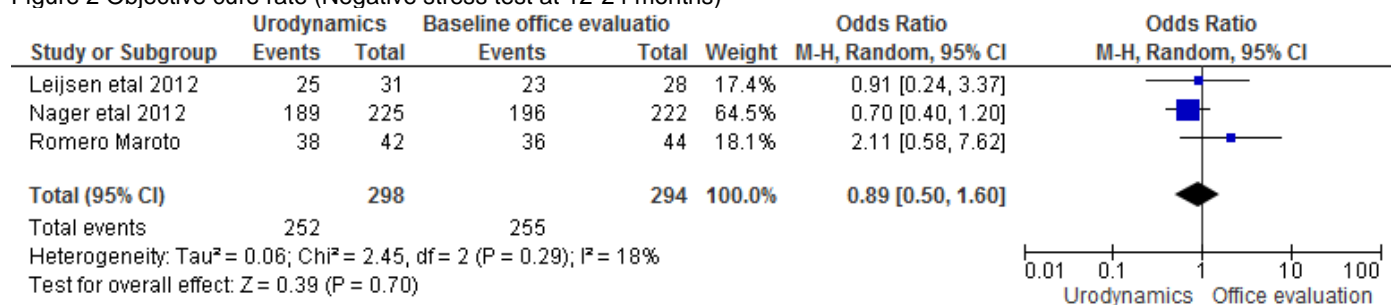


Figure 2 Objective cure rate (Negative stress test at 12-24 months)



References

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3. Romero Maroto J. Does pressure flow study improve the outcome of surgery in women with SUI. *European Urology Supplements* 92, 228. 2010. Ref Type: Online Source

Disclosures

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