

190

Authors: H.H. Woo, H.M. Scarpero, and C.J. Winters
Institution: Ochsner Clinic
Title: COMPARISON OF SIMPLE BLADDER MANOMETRICS (“EYEBALL CMG” AND SUPINE STRESS TEST) TO MULTI-CHANNEL URODYNAMIC STUDIES IN THE EVALUATION OF FEMALE URINARY INCONTINENCE

Aims of Study:

To compare the results of simple bladder manometrics to multi-channel urodynamics, and examine the effect of detrusor instability (DI) on the predictive value of a Valsalva supine stress test (VSS) to predict the presence of Intrinsic Sphincteric Deficiency (ISD).

Methods:

62 patients with urinary incontinence underwent “eyeball CMG” (eCMG) testing during the physical examination. The test was performed using a syringe attached to a catheter 15cm above the urethra. During filling, potential signs of DI (stop of filling or rise in the fluid chamber) were recorded. At 200 ml, the patient performed a Valsalva maneuver and cough in the supine and standing position, and leakage was recorded. These patients underwent multi-channel urodynamic studies. Abdominal Leak Point Pressures were recorded. Intrinsic Sphincteric Deficiency (ISD) was defined as < 100 cm H₂O. The two studies were correlated statistically utilizing McNemar’s test of symmetry and Kappa measure of reliability.

Results:

Using urodynamics as the standard, determination of DI by eCMG had a sensitivity of 88.9% and a specificity of 70.5%. The positive predictive value (PPV) was 66.7%, and the negative predictive value (NPV) was 92.3%. The sensitivity of VSS to detect all types of stress urinary incontinence (SUI) was 90.6%, and the specificity was 44.5%. The PPV of VSS to detect SUI was 85.2% and the NPV was 72.7%.

The correlation of a positive supine VSS with ISD is significantly less in patients with findings of DI on eCMG (McNemar 0.006; Kappa 0.132) when matched to those without DI (McNemar 0.083; Kappa 0.772), as seen in the graphic below:

eCMG Test	No SUI	Type II SUI	ISD
DI Present (N=18)	8	6	4
DI Absent (N=19)	0	3	16

Conclusions:

The demonstration of detrusor instability on eCMG is a reliable predictor of the appearance of DI on urodynamic studies. There is a negative effect of DI on the specificity of VSS to predict ISD.

In patients without DI on eCMG testing, a positive supine Valsalva stress test correlates highly with ISD. In this scenario, eCMG may replace more complex urodynamics. If DI is present on eCMG testing, more complex urodynamic studies should be done due to the lack of correlation of a positive supine stress test and ISD.

