

## **PRE AND POSTOPERATIVE VIDEOURODYNAMIC EVALUATION IN FEMALE PATIENTS TREATED BY MINI-INVASIVE SURGERY DUE TO STRESS URINARY INCONTINENCE**

### **Hypothesis / aims of study**

There is still controversy today about the “gold standard” diagnostic morphologic tool for the evaluation of females with stress urinary incontinence. Recently many studies have been proposed about the use of ultrasonography and pelvic fast speed sequences MR in the evaluation of this kind of pts, but they still present various limits almost when is necessary an evaluation preliminary to a surgical approach when is mandatory not only an anatomic evaluation but also the functional study of lower urinary tract. In this study we evaluated the role and utility of videourodynamic in the pre and postoperative evaluation of pts submitted to mini-invasive surgery due to stress urinary incontinence.

### **Study design, materials and methods**

90 female pts with symptoms of stress urinary incontinence (medium age 57,6) have been submitted pre and postoperatively to videourodynamic study carried on in standing and sitting position, with 50 ml/min contrast medium infusion, V.L.P.P. (Valsalva Leak Point Pressure) evaluation at medium and maximum filling and fast speed sequences digital images recording during filling, voiding and V.L.P.P. phases. All the pts in sitting position have been also simultaneously studied by superficial electromyography of perineal floor.

### **Results**

All the pts presented a good compliance during the procedure. Medium time of videourodynamic execution was 52 min (+/-11,8). Digital fluoroangiographic method allowed morphologic dynamic studies of very high quality. The preoperative studies permitted to perform optimal correlation between clinic symptoms, physical examination data and urodynamic features. Particularly, radiologic VLPP determination allowed the perfect performing of VLPP test with a better accuracy in the determination of type and severity of stress urinary incontinence and consequently allowing a contribute in the correct surgical selection. The simultaneous electromyography allowed to identify the pts affected by pseudo-dyssinergia of pelvic floor suggesting the necessity to indicate pre or postoperative pelvic floor exercises. In the follow-up, the videourodynamic test confirmed the restitution of the local correct anatomy digitally comparing the images of the results with the pre-operative evaluation and showing the functional improvement during the voiding phase.

### **Interpretation of results**

Videourodynamic study present several advantages comparing to the other diagnostic tool particularly related to the simultaneous morpho-functional evaluation which allows to correlate urodynamic and anatomic data. The digital technique allows also to store the pre-operative data and digitally compare them with the post-surgical results by superimposing of the imaging records.

### **Concluding message**

Videourodynamic study is an high-quality diagnostic tool which represents a valid contribute in the study and in the safe and correct selection of pts who have to be submitted to a surgical approach due to stress urinary incontinence and it also may help in the selection of the best procedure for the patient. Moreover, almost for the digital technique, it permits a good follow-up precisely comparing the anatomic and urodynamic pre-operative data with the post-surgical outcomes with a low-radiation exposure thanking to the fluoroangiographic technique. It still presents high costs which can be considered its real limit.

### **References**

Kuo HC: Comparison of videourodynamic results after the pubovaginal sling procedure using rectus fascia and polypropylene mesh for stress urinary incontinence. J Urol; 165(1):163-168. 2001.