

## URODYNAMIC EXAMINATIONS PERFORMED BEFORE STRESS INCONTINENCE SURGERY IN FEMALE PATIENTS: COSTS' ANALYSIS IN ITALY

### Hypothesis / aims of study

The role of urodynamic investigations (UDI) has been recently questioned: in particular, patients with uncomplicated urinary stress or mixed incontinence seem to show similar post-operative outcomes if investigated with or without UDI (1). A recently published paper showed that in the United States of America (USA) around 13-33 million dollars could be saved if UDI would not been performed in a higher/lower proportion of uncomplicated patients (2). The aim of the present study was to investigate the costs of UDI before surgery for female stress incontinence in Italy and the possible savings produced by the exclusion of these examinations from the pre-operative evaluation in uncomplicated patients.

### Study design, materials and methods

The costs of UDI were calculated considering the maximum reimbursement provided by the national health system (NHS) for the execution of cystometry and pressure/flow study and urethral pressure profilometry. The amount of surgical procedures performed were calculated using the databases of Italian urogynaecological and urological centers for the year 2012. The percentage of expected "uncomplicated" patients were extrapolated by a recent paper on Italian female patients evaluated before surgery for stress urinary incontinence (3). UDI costs were considered as if every patient who underwent surgery also underwent a UDI (cystometry and pressure/flow study and urethral pressure profilometry) paid by NHS with the highest reimbursement. The saved costs were calculated assuming that every "uncomplicated" patients avoided UDI. The costs were calculated in euros and in dollars and the amount of money spared by not performing UDI in uncomplicated patients were considered as a total and per 1000 of inhabitants.

### Results

We were able to assess that the maximum reimbursement provided by Italian NHS for UDI is 206€ (223,07\$, exchange rate of 1,082). A total of around 10.000 surgical procedures for female stress urinary incontinence had been performed in 2012, according to the available database; we decided to use the number of 10.000 for the subsequent calculations. The maximum amount of money spent for UDI in these patients is consequently 2.060.000€ (2.230.700\$). The percentage of "uncomplicated" patients in Italy, according to the previously cited paper (3) is 36%; thus, UDI could have been omitted in 3.600 patients, with a consequent saving of 741.600€ (802.441,20\$). The amount of surgical procedures in Italy is 1 every 6.000 inhabitants (Italian population: 60.000.000 people); according to previously cited paper (2), in the USA it is 1 every 1215 inhabitants (USA population: 316.000.000 people); the amount of money saved per 1.000 inhabitants is 13,72\$ in Italy, whilst in the USA it may vary between 41,14\$ and 104,43\$.

### Interpretation of results

According to the present study, excluding the urodynamic evaluation in "uncomplicated" patients before surgery for stress urinary incontinence, could save a total of 741.600€ (802.441,20\$, 13,72 per 1.000 people). These amounts seem considerably lower than those estimated for the USA (13-33 million dollars; 41,14-104,43\$ per 1.000 inhabitants). The reasons for these differences are: a lower number of surgical procedures performed in Italy (adjusted for total population); a lower reimbursement of UDI by the Italian NHS; a lower number of "uncomplicated" patients calculated in the present paper (36 vs. 50%) (2). Limits of this study are: costs calculation based only on the hypothesis to omit UDI in all "uncomplicated" patients; no calculation of out of pocket costs for the patients. Strengths are: use of data coming from databases and from NHS reimbursement lists; use of a percentage of "uncomplicated" patients coming from a multicentric database of more than 2.000 patients (3). The amount of money saved by the omission of UDI in Italy seems lower than in the USA and probably not relevant, in comparison to the global costs of urinary incontinence (300 million euros per year only for pads in Italy, according to the Italian Association of Incontinent patients -FINCO-).

### Concluding message

The costs of UDI seem to be moderate in Italy and lower than those reported for the USA; the savings obtained by non performing UDI in "uncomplicated" patients seem not relevant in comparison to the total costs of urinary incontinence. These Italian data may reflect the situation of other European countries, even if differences in National Health Systems are huge.

### References

1. N Engl J Med. 2012 May 24;366(21):1987-97
2. Neurourol Urodyn. 2014 Oct 18. doi: 10.1002/nau.22684
3. Neurourol Urodyn. 2014, vol. 33, p. S37-S38

### Disclosures

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