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PREVALENCE OF URINARY INFECTION AFTER URODYNAMIC INVESTIGATION

Hypothesis / aims of study
This investigation aims to evaluate the prevalence of urinary tract infection after urodynamic investigation and evaluate risk factors.

Study design, materials and methods
A prospective investigation with 88 patients who underwent urodynamic investigation from January to July 2008 was done. All participants underwent anamnesis, Uroflowmetry with collection of urine sample for urinalysis and urine culture, clinical examination, urodynamic investigation and collection of the 2nd urine sample 7 days after examination. Risk factors for urinary tract infection were analyzed by correlation of clinical variables: age, urinary complaints, menstrual status, clinical diseases, reports of intercourse before and after the test, degree of genital prolapse and complications during the procedure. Statistical analysis used the Fisher exact test for categorical variables and Student t test for numerical variables with a significance level of $p < 0.05$. The prevalence of urinary tract infection was evaluated by descriptive analysis.

Results
Of 88 patients enrolled, 17 were excluded because they were a positive urine culture / contaminated before the test or did not return within 7 days for new urine collection. Of the 61 patients evaluated 3 (4.9%) developed urinary tract infection after the test.
Fifty eight patients did not develop urinary tract infection after the test. The mean age of this group of patients was 52 years (SD 11.9), 53 were female and 5 male. Before the examination 61% complained urge incontinence, 70% stress incontinence, feeling of incomplete emptying in 32% (19), constipation in 34% and fecal incontinence in 5%. Of the female patients, 54% were postmenopausal. With respect to comorbidity, 43% (26) had hypertension and 3 patients (6%) had a history of recurrent UTI. Three patients who had intercourse at least 7 days prior to the urodynamic investigation. Detrusor overactivity was observed in 16 patients (29%) and stress incontinence in 33 (54%). In clinical control 7 days after the examination, 2 patients reported fever (3%), 6 reported hematuria (10%) and 19 reported somewhere (32%).
A descriptive analysis of the 3 patients that develop urinary tract infection after the test showed that all were female and were postmenopausal with a mean age of 67 years (SD = 11.3). One was nulliparous and 2 were multiparous, all with vaginal delivery. Regarding urinary complaints before the test 2 patients had urge incontinence, and one had urinary incontinence. Only one patient reported constipation and was hypertensive. The urodynamic findings are detrusor overactivity in one case and stress incontinence in two. The 3 patients had no intercourse after the test. The agent found in all womwn was *Escherichia coli*.
When doing a comparative analysis of patients who had urinary tract infection after examination with those who did not, in order to identify risk factors, only patient age (> 65 years) showed statistical significance ($p = 0.039$). No other variable had significant correlation.

Interpretation of results
The urodynamic investigation is widely used by gynecologists and urologists. It is invasive procedure and the risk of urinary infection is 1 to 30%, despite its low morbidity. We found almost 5% of urinary infection after the procedure and the major risk facto for infection was was age > 65 years. So in this group of patients we believe that the use of antibiotic prophilaxis can bring benefits.

Concluding message

We conclude that our prevalence of urinary tract infection after urodynamic investigation was 4,9% and the independent risk factor identified was age > 65 years.

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
Is this a Randomised Controlled Trial (RCT)?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Federal University of Minas Gerais Ethics Committee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**