

Author(s) , G.Audonnet¹, F.A. Valentini², P.P. Nelson².

Institution, city, country

¹Service de Médecine Physique, Centre Hospitalier, Niort, France; ²Service de Rééducation, Hôpital Jean Rostand, Ivry-sur-Seine, France.

Title (type in CAPITAL LETTERS, leave one blank line before the text)

IMPACT OF AGE ON LOWER URINARY TRACT FUNCTION IN A POPULATION OF WOMEN WITH STRESS URINARY INCONTINENCE (SUI).

Aims of study: To evaluate the impact of ageing on lower urinary tract function of women suffering from SUI.

Methods: Between 400 consecutive women evaluated for lower urinary tract dysfunction, we study 69 patients suffering from SUI and free from overt neurological disease and diabetes mellitus, and without previous surgery of incontinence. The age-range covered 4 decades (30-69 years) with the following distribution (n = 19, 26, 16 and 8). They had urogynaecological examination and underwent the following urodynamic tests: free uroflow (volume V1), measurement of postvoid residual volume (PVR1), urethral pressure profile, water cystometry at medium filling rate and, after withdrawal of the 12F urethral catheter, a second free flow (V2 and PVR2).

Modelized analysis of the free flows was then performed using a micturition mathematical model [1] in order first to evaluate a urethral parameter g (= 1 for a normal urethra, < 1 in case of a constrictive obstruction), and second to calculate a characteristic parameter of detrusor efficiency (named F40, = 1 for a normal function, < 1 in the other cases).

Author(s) G.Audonnet¹, F.A. Valentini², P.P. Nelson²

Results: Comparing the 4 sub-groups, the following age-associated urodynamic changes were observed: decrease of V1 and increase of the ratio of PVR1 > 10 mL (50% in the fourth decade). On the opposite, V2 (corresponding to bladder capacity), Qmax 1 and 2 remained comparable. Both ratio of PVR2 and mean value of PVR2 were lower than for the first flow.

Maximum urethral closure pressure (MUCP) was smaller than the expected value for 10% of the patients in each decade. No change of the functional urethral length was observed. Incidence of grade I-II cystocele was the same equal 25% in the whole population. Poor muscular testing of the levator ani muscle was found in 87% of the 60-69 years group and only 22% of the 30-59 years group.

As previously described [2], no change of the urethral parameter g was pointed out between the 2 flows of a given patient. In addition, no significant variation of that parameter was found between the 4 sub-groups.

During the first flow, the F40 parameter was evaluated equal to 0.50 for the 3 first decades but dropped to 0.27 for the oldest sub-group. During the second flow, a tying of the values was observed in agreement with a normalization of the neural control.

Conclusion: Both urodynamic tests and modelized analysis of free uroflows lead to the same unexpected result in our population of women with SUI: no parameter is significantly modified by ageing, excepted the muscular testing. Despite the aging process is frequently associated with mixed pathologies, the results of this study would benefit from comparison with a more older population of SUI women

[1] Neurourol.Urodyn.2000;19(2): 153-176. [2] Ann Réadap Méd Phys 1998; 41: 195-201.