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WOMEN OVER 80Y OLD, IS URODYNAMICS CONTRIBUTIVE FOR MANAGEMENT OF LOWER URINARY TRACT DYSFUNCTION.

Hypothesis / aims of study
Population ageing has as consequence an increasing number of women older than 80 y with lower urinary tract symptoms (LUTS). In that older population, a better management of neurological disease induces a not negligible sub-population with that clinical condition. Moreover, despite the old age and the increasing number of co-morbidities, urodynamic study is currently performed to diagnose the cause of LUTS. The remaining issue is the contribution of urodynamics to the management of LUT dysfunction.

Study design, materials and methods
One hundred and fifty three files of women older than 80y were retrospectively analysed. Sub-populations were respectively 117 non-neurological and 36 neurological women. Each file comprised demographic data, medical history, urodynamic parameters and diagnosis, and proposed management.

Results
1- *Non-neurological population*
Mean co-morbidities were 2.5 per woman, mainly cardio-vascular (57.4%), endocrinology (43.6%), musculo-skeletal (40.4%), previous pelvic surgery (30.8%) and cognitive impairment (29.9%).
Complaints were 78 incontinence (of which 18 stress incontinence, 35 mixed incontinence and 25 urgency incontinence), 19 frequency, 13 incomplete retention or dysuria and 7 pre-operative for prolapse.
Twenty one (17.9 %) had failure of previous treatment: 4 recurrent incontinence after surgery, 17 insufficient improvement by local oestrogen therapy or anticholinergic.
Urodynamic diagnosis (UD) was categorized as normal (non-contributory, 28 N), detrusor overactivity (39 DO), detrusor underactivity (25 DU) and intrinsic sphincter deficiency (25 ISD).
The best indicators for UD were first desire (increased in DU and ISD vs. DO p<.0001 and in DU vs. N p=.0003), functional bladder capacity (reduced in DO vs. DU and ISD p<.0001, vs. N p=.0003, and N vs. DU p=.067) and post residual volume (reduced in DO vs. N, DU and ISD <.01 and increased in DU vs. ISD and N); maximum flow rate (Q_{max}) and detrusor pressure at Q_{max} were not significant; voiding time (t_{mic}) was reduced in DO vs. DU p=.0065.
During free uroflow the only diagnosis indicator was t_{mic}, greatly reduced in DO vs. N p=.0145, vs. DU p <.0001 and vs. ISD <.0065.
There were 86 (73.5%) treatment proposals which were based on the complaint when UD was “N” and on UD for DO (anticholinergic or physiotherapy), DU (prompted voiding or self-catheterization) and ISD (physiotherapy, local oestrogen therapy or surgery). Among the 21 women with previous treatment, 7 noticed no change.

2- *Neurological population*
Mean co-morbidities were 3.1 per woman, mainly cardio-vascular (44.4%), endocrinology (38.8%), musculo-skeletal (55.5%) and previous pelvic surgery (55.5%), cognitive impairment (38.8%). Neurological disease was hemispheric in 23 and spinal cord injury in 13.
Complaints were 20 incontinence (of which 9 urgency incontinence and 11 mixed incontinence), 4 frequency, 11 incomplete retention or dysuria and 1 pre-operative for prolapse.
Four (11.1%) had failure of previous treatment: 1 recurrent incontinence after surgery, 3 insufficient improvement by local oestrogen therapy or anticholinergic.
Urodynamic diagnosis (UD) was categorized as normal (non-contributory, 6 N), detrusor overactivity (16 DO), detrusor underactivity (11 DU) and intrinsic sphincter deficiency (3 ISD).
The best indicators for UD were first desire (increased in DU vs. DO, p=.001), functional bladder capacity (reduced in DO vs. N p=.0093 and DU p<.0001) and post residual volume (increased in DU vs. DO p<.0001 and N p<.0003); maximum flow rate (Q_{max}), detrusor pressure at Q_{max} and voiding time (t_{mic}) were not significant.
During free uroflow the only diagnosis indicator was PVR, greatly increased in DU vs. N p=.0016 and DO p=.0004.
Treatment proposals were mainly prompted voiding or self-catheterization (30%) based on DU diagnosis.

Interpretation of results
Comparison between the two sub-populations brings to the fore significant differences.
In neurological women occurrence of comorbidities is higher (3.1 vs. 2.5) and incidence of pelvic surgery more frequent (55.5% vs. 30.8%). Main complaint is significantly different: incontinence in non-neurological group (66.7% vs. 55.5%) and incomplete retention and dysuria in neurological one (30.5% vs. 11.0). Failure of previous treatment is lower in the neurological group (11% vs. 18%). The best indicators for urodynamic diagnosis are not very different in the two populations. The only significant difference is observed during free uroflow: increased post void residual volume in neurological population and decreased voiding time in non-neurological one.
While in non-neurological women the treatment is based on the main complaint when urodynamis is “normal”, in neurological women treatment proposals are mainly based on demonstration of detrusor underactivity,.

Concluding message

Usefulness of urodynamics to manage LUT dysfunction in women older than 80 y is greatly dependent on their neurological status. In non-neurological women this is non debatable but proposed treatment needs to take into account existing co-morbidities. In neurological women the main usefulness is to confirm DU and to propose the best management in order to avoid complete retention.

Disclosures

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