

URODYNAMIC FINDINGS IN PATIENTS WITH INSENSIBLE INCONTINENCE

Hypothesis / aims of study

Insensible incontinence is the complaint of urinary incontinence where the person has been unaware of how it occurred. We sought to determine the urodynamic (UDS) findings, in patients with the undifferentiated symptom of insensible incontinence alone or in conjunction with symptoms of stress urinary incontinence (SUI) and or urgency incontinence (UI)

Study design, materials and methods

This was a retrospective review of patients who underwent a UDS study at a single institution from January, 2003 to October, 2009. Patients were included if insensible incontinence was part of the presenting symptoms. Patients were excluded if they had an existing diagnosis of neurogenic bladder. Incontinence during UDS was classified as urodynamic SUI (USUI) or detrusor overactivity incontinence (DOI)

Results

Table 1: Symptoms correlated with urodynamic findings

| Symptoms N (%) | Insensible incontinence only | Insensible + UI | Insensible + SUI | Insensible + UI + SUI |
|---------------------|------------------------------|-----------------|------------------|-----------------------|
| | N=57 | N=13 | N= 24 | N=9 |
| Urodynamic findings | N (%) | | | |
| DOI | 9 (16) | 7 (54) | 1 (4) | 1 (11) |
| SUI | 18 (32) | 3 (23) | 16 (66) | 5 (56) |
| DOI + SUI | 9 (16) | 3 (23) | 3 (13) | 2 (22) |
| No USUI or DOI | 21 (37) | 0 | 4 (17) | 1 (11) |

Table 2: Insensible incontinence alone or with SUI and UI

| | Insensible incontinence only | Insensible + UI and/or SUI |
|--------|------------------------------|----------------------------|
| Female | 43 | 31 |
| Male | 14 | 15 |

Table 2: Male patients: Symptoms vs Urodynamic findings:

| Symptoms (%) | Insensible incontinence only | Insensible + UI | Insensible + SUI | Insensible + UI and SUI |
|----------------|------------------------------|-----------------|------------------|-------------------------|
| UDS | N=15 % only | N=8 | N=7 | N=2 |
| DOI | 29 | 63 | 0 | 0 |
| USUI | 7 | 25 | 40 | 50 |
| DOI + USUI | 29 | 13 | 40 | 50 |
| No USUI or DOI | 36 | 0 | 20 | 0 |

Table 3: Female patients: Symptoms vs Urodynamic findings:

| Symptoms (%) | Insensible incontinence | Insensible + UI | Insensible + SUI | Insensible + UI and SUI |
|----------------|-------------------------|-----------------|------------------|-------------------------|
| UDS findings | N=43 % only | N=5 | N=19 | N=7 |
| DOI | 12 | 40 | 5 | 14 |
| USUI | 40 | 20 | 73 | 57 |
| DOI + USUI | 12 | 40 | 5 | 14 |
| No USUI or DOI | 37 | 0 | 16 | 14 |

Interpretation of results

Patients' presenting symptoms were correlated to UDS findings, shown in table 1.

This shows that patients who had insensible and either SUI or UUI only, were likely to have UDS findings demonstrating that type of incontinence.

Patients who had all three symptoms, were still most likely to have SUI (56%) or SUI and DO (22%) but unlikely to have DO only.

In patients with only insensible incontinence, SUI was the most likely UDS finding; alone (32%) or with DOI(16%). 37% had no demonstration of USUI or DOI. These patients had a spectrum of findings including: 11 had no incontinence demonstrated, 4 had impaired compliance, 1 each had obstruction due to urethral stricture, enlargement of the uterus ,previous sling surgery. 1 patient had reduced flow. 1 had dysfunctional voiding. 1 had a suspected vesico-vaginal fistula.

There were notable differences between men and women with symptoms. For those with II and SUI, the majority of women had USUI (73%) where as men were equally likely to have USUI or USUI and DOI.

The converse applied for UUI and II, the majority of men had only DOI (63%) whereas women were equally likely to have DOI and DOI plus USUI

In insensible only, women were also mostly likely to USUI while men were unlikely to have SUI only.

Concluding message

Our study demonstrates that when symptoms of SUI and UUI accompany insensible incontinence, this can be useful guide to the predominant UDS findings. This correlation is particularly true for women with SUI and men who have UUI in conjunction with insensible incontinence. Patients who present with insensible incontinence alone have more varied results on UDS, for women USUI is still most likely, whereas for men DOI or DOI plus and USUI is most common.

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| <i>What were the subjects in the study?</i> | HUMAN |
| <i>Was this study approved by an ethics committee?</i> | Yes |
| <i>Specify Name of Ethics Committee</i> | NYU University school of medicine IRB |
| <i>Was the Declaration of Helsinki followed?</i> | Yes |
| <i>Was informed consent obtained from the patients?</i> | No |