

## THE EVOLUTION OF TREATMENTS, TERMS AND TERMINOLOGY; URINARY INCONTINENCE MIXED –UP?

### Hypothesis / aims of study

Recently (2010) the International Urogynecological Association (IUGA) and the International Continence Society (ICS) have joined forces to publish a report on the terminology for female pelvic floor dysfunction<sup>1</sup>, adding to the ICS standardisation of terminology of lower urinary tract (LUT) function (2002)<sup>2</sup>, which was a revision of earlier ICS reports. The IUGA and ICS have a well acknowledged tradition and authority to standardise terms and to develop standards for diagnostic tests and techniques in the medical field of LUT function and dysfunction.

Despite many efforts to develop these standardisation reports, it is not intensively evaluated which effect they have, or have had, on the use of terms. To evaluate this we have selected a set of terms (see table) that are related to core activities of the IUGA and the ICS and are lively discussed in the scientific literature of the last 35 years, because of 'treatment-shifts'. With regard to urinary incontinence treatment with 'colposuspension' has been 'replaced' by 'tension free vaginal or obturator tape (TVT/TOT)'. With regard to 'neurogenic detrusor overactivity', the treatment with botulinum toxin was introduced. We present these as 'index-cases' to evaluate the effect of standardisation of terms and to explore on influences on the use of terminology in the scientific literature.

### Study design, materials and methods

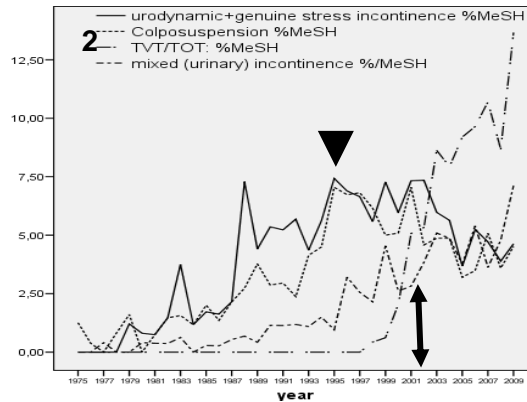
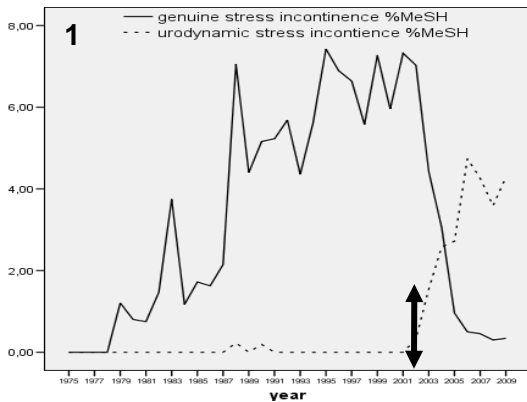
With help of PubMed (a free resource on the internet, developed and maintained by the National Center for Biotechnology Information, at the U.S. National Library of Medicine; National Institutes of Health) word- counts (in title and abstract) were done per year starting from 1975, to 2009. We have counted the yearly occurrence of the word-combinations (see table). In the right column we provide relevant information about these:

MeSH* urinary incontinence	PubMed 'searches' all articles about 'urinary incontinence' (whatever terms used in the article)
MeSH urinary incontinence, stress	PubMed 'searches' all articles about 'stress urinary incontinence'
genuine stress incontinence	Preferred term before 2002.
urodynamic stress incontinence	Preferred term after 2002 (replaces genuine stress incontinence). <sup>2</sup>
colposuspension	(Surgical) Treatment mentioned in PubMed since 1975
Mixed (urinary) incontinence	Defined in 2010 as a <i>symptom</i> -combination <sup>1</sup> Never defined earlier.
TVT / TOT	(Surgical) Treatment mentioned in PubMed since 1998
urge urinary incontinence	Changed in 2002, but defined also earlier. <sup>2</sup>
urinary urge incontinence	Variation of the term above, never defined or advised.
urgency urinary incontinence	Variation of the term above, never defined or advised.
detrusor overactivity incontinence	Since 2002 new defined. <sup>2</sup>
urodynamic observation	Since 2002 new defined. <sup>2</sup>
urodynam <sup>#</sup>	# = 'wild card': searched for all words beginning with urodynam...
neurogenic bladder	Word set that is never defined.
neurogenic detrusor overactivity	defined since 2002. <sup>2</sup>
(boto <sup>#</sup> OR botul <sup>#</sup> ) AND (detrusor OR bladder OR intravesical)	(with # 'wild cards') botox or botuline (treatment)

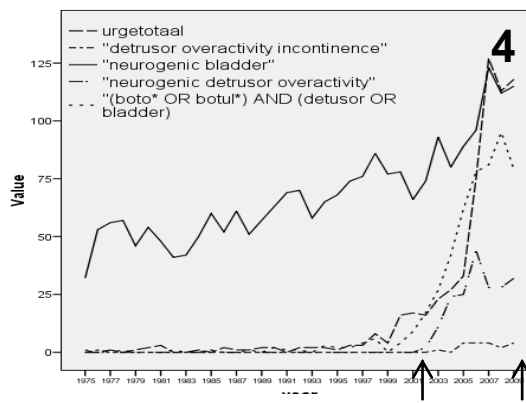
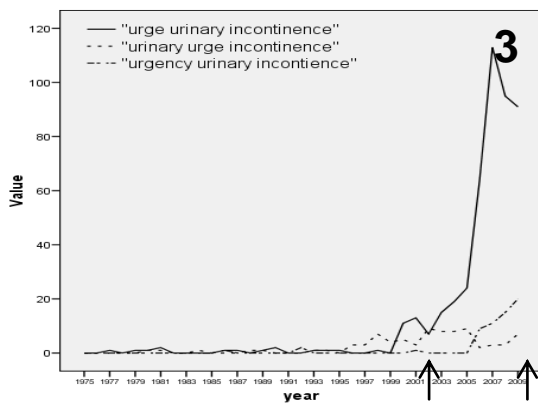
\* Medical Subject Heading (MeSH) controlled vocabulary used for indexing articles that may use different terminology for the same concepts.

### Results

We observed a gradual increase of articles concerning 'urinary incontinence' (MeSH) from 250 in 1975 to >1000 per year from 2004 onwards. The proportion of (MeSH) 'stress urinary incontinence' has been relatively constant on 24% ± 4% throughout the years. We present terms in the following figures (1 & 2) as percentage of 'urinary incontinence MeSH' manuscripts. Graph 1 shows a sharp decrease of 'genuine stress incontinence' and an increase of 'urodynamic stress incontinence' associated with the publication of the ICS 2002 standard (↓). Graph 2 shows an increase of genuine + urodynamic stress incontinence synchronous with 'colposuspension' until 1995(▼) and a subsequent reduction of both in 2001. This graph also shows a steep increase of 'TVT/TOT', associated with the decline in 'colposuspension' as well as with the decrease in genuine+urodynamic stress incontinence. Furthermore the increase in 'TOT/TVT' is associated with an increase in 'mixed (urinary) incontinence'. The percentage of manuscripts containing urodynam<sup>#</sup> (wild search) has been around 85% between 1981 and 1995 and diminished thereafter to ± 65%. (Not on graph). The term: 'urodynamic observations', has almost never been used, despite its introduction in 2002. (Not on graph).



Urge urinary incontinence (2002 term) is increasing since the report (graph 3, presented as absolute number of papers) however the variations also and especially 'urgency urinary incontinence' since 2005, related to a series of pharmacotherapy studies. 'Neurogenic bladder' is although never defined, frequently used (graph 4) and a steep rise in (the sum of) of 'urge incontinence' –all term variations, associates with a similar increase in 'botox' or 'botulinum'. Both: 'detrusor overactivity incontinence' and 'neurogenic detrusor overactivity' show a relatively modest increase after 2002.



### Interpretation of results

The terms 'mixed (urinary) incontinence', as a symptom, and 'urgency (urinary) incontinence' as a sign or a symptom are introduced in the 2010 report, however were already 'rising stars' a few years before recommendation or standardisation, associated with respectively TVT/TOT and pharmacotherapy-trials. The term 'genuine stress incontinence' has been effectively abandoned since the 2002 report. Terms related to urodynamic testing, and urodynamically based diagnoses are used in a relatively declining frequency.

### Concluding messages

The use of terms that refer to objective diagnosis and urodynamics, in manuscripts that relate to lower urinary tract function and incontinence, declines. Careful evaluation of the effect of the 'new' category of incontinence: 'mixed incontinence', on treatment outcomes seems mandatory. The introduction of terms through standardisation reports has a measurable influence on their use in publications. However, the introduction of terms seems also been influenced by the terms accompanying the introduction of new treatment modalities. Some of the terms, introduced in reports are not frequently used. The terms that were introduced in the recent (2010) report, appear influenced by newly launched therapies.

### References

1. Abrams et al Standardisation of Terminology NU&U (21)167-178; 2002
2. Haylen et al IUGA and ICS Report on Terminology NU&U (29) 4-20; 2010

**Specify source of funding or grant**

none

**Is this a clinical trial?**

No

**What were the subjects in the study?**

NONE