

A PARADIGM SHIFT IN SURGICAL TREATMENT OF URINARY INCONTINENCE IN DENMARK FROM 2001 TO 2008

Hypothesis / aims of study

The aims of the study were to investigate the number and types of incontinence procedures and the distribution within "high"- and "low"-volume departments in Denmark from January 2001 to December 2008.

Study design, materials and methods

In Denmark all hospital activities are registered by law in the Danish National Patient Register (DNPR), which allows the possibility for monitoring types and number of surgical procedures, number of departments and distribution between "low" and "high" volume departments on a national basis.

The administration of DNPR is situated within the Danish National Board of Health (NBH). Through collaboration with the NBH, data was extracted from the DNPR on women who had surgery due to urinary incontinence from 2001 to 2008.

Results

It appears that the total number of procedures per year increased from a total of 608 procedures in 2001 to 1543 procedures in 2008 with a plateau reached in 2006.

Table 1 and figure 1 shows that abdominal procedures like Colposuspension have been abandoned in favor of minimal invasive procedures (Tension-free Vaginal Tape (TVT) and Trans-Obturator Tape (TOT)) in the period from 2001 to 2008. In 2005 the primary mid-urethral sling procedure was "TVT", whereas in 2008 "TOT" were performed more frequent comprising 46% (496/(590+496)) of the mid-urethral sling procedure.

Table 1

Incontinence procedures	2001	2002	2003	2004	2005	2006	2007	2008
Colposuspension, fascia sling	128	112	90	46	87	10	2	7
Tension-free Vaginal Tape (TVT)	413	741	917	1061	956	892	740	590
Trans-Obturator Tape (TOT)					35	289	488	496
Urethral injection (Bulking)	43	66	102	109	247	346	265	314
Other (*from 2005 incl. Botox inj.)	24	19	23	0	5	44	59	136
Total	608	938	1132	1216	1330	1581	1554	1543

Figure 1

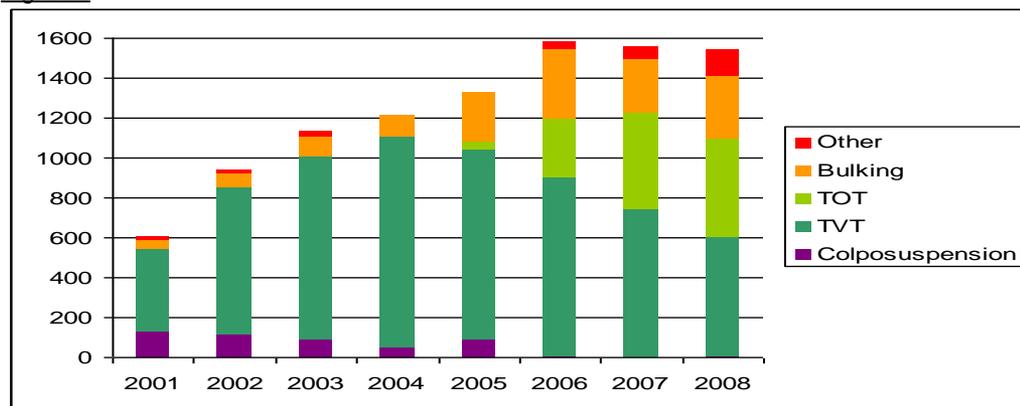


Table 2 shows the distribution of procedures between "low" (<50 procedures/3 years) and "high" (>140 procedures/3years) volume departments in two separate periods. The absolute number of "low" volume departments was approximately the same. However, the "low" volume departments performed only 9% of all procedures in 2006 to 2008 due to an increase in the total number of procedures.

Table 2

Procedures (n per 3 years)	Departments: n (% of all)		Procedures: n (% of all)		Interpretation of results
	2001-2003	2006-2008	2001-2003	2006-2008	
"High" volume dept. (>140)	7 (14%)	12 (24%)	1354 (51%)	3436 (73%)	Procedures used for surgical treatment of
Between 50 and 140	11 (21%)	9 (18%)	932 (35%)	818 (18%)	
"Low" volume dept. (<50)	33 (65%)	29 (58%)	392 (14%)	424 (9%)	
Total	51 (100%)	50 (100%)	2678 (100%)	4678 (100%)	

urinary incontinence have demonstrated a clear paradigm shift towards minimal invasive surgery in the investigated period. The total number of female surgical urinary incontinence procedures has more than doubled from 608 procedures in 2001 to 1543

procedures in 2008, reaching a plateau in 2006. Despite the lack of long-term data on efficacy, TOT has swiftly become a challenge to TVT.

Over time many departments are still involved and the majority of these are "low" volume departments performing less than 50 procedures in a 3-year period.

Concluding message

In Denmark, the surgical treatment of urinary incontinence in women has demonstrated a clear paradigm shift from 2001 to 2008. The decentralized organisation with many "low" volume departments seems inappropriate to secure high surgical quality.

<i>Specify source of funding or grant</i>	NONE
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require ethics committee approval because</i>	NONE needed.
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	No