

## IDIOPATHIC DETRUSOR OVERACTIVITY IN WOMEN – A 5-10 YEAR LONGITUDINAL STUDY OF OUTCOMES

### Aims of Study

To date, there have been no published data about either the long-term response to therapy for urodynamically proven detrusor overactivity (DO), nor about the natural history of the disease.

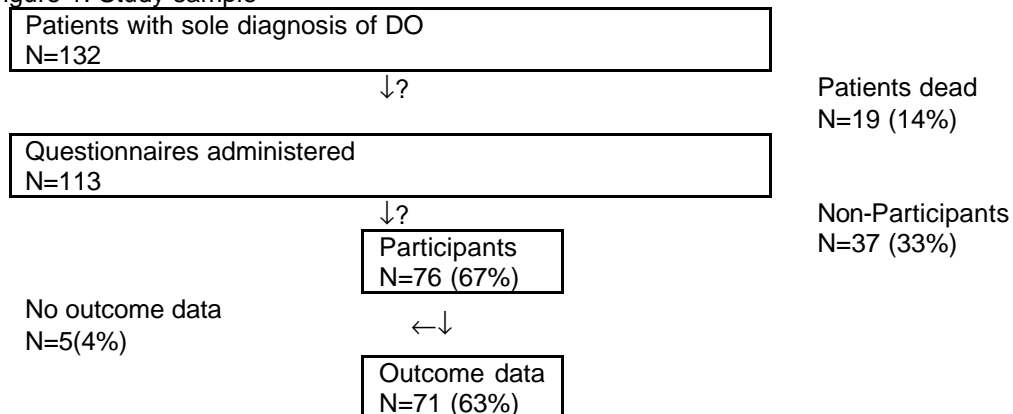
We conducted a retrospective cohort study of patients with DO 5-10 years after first clinic attendance. We aimed to:

- 1) determine whether patients with the phasic and non-compliant form of the condition differed substantially with respect to clinical characteristics and outcomes.
- 2) examine clinical outcomes at (a) the last clinic visit and (b) 5-10 years after the date of the first visit.
- 3) describe the natural history of the disease in the 5-10 year period from initial visit.

### Methods

A consecutive series of patients who had urodynamically proven DO and initially attended a tertiary urogynaecology clinic between 1992-1997 were identified. All urodynamic tracings were re-examined. Patients with co-existent lower urinary tract dysfunction were excluded (Figure 1).

Figure 1. Study sample



Demographic parameters, duration/nature of presenting symptoms, past medical history/treatments, family history, data from the initial 24hour frequency/volume chart & cystometry report were abstracted. Outcomes were defined at two time points as follows:

1) Outcome at last clinic visit: At each visit the treating physician recorded the percentage change in symptoms from baseline (ie at time of initial visit). The outcome status as recorded at subjects' final visit was abstracted and categorised for analysis as per Table 1.

2) Outcome 5-10 years post initial clinic visit: A followup questionnaire enquiring about subjects' current LUT symptoms & perceived course and outcome of their disease was administered. Outcome was determined by respondents' views about how effective treatments had been in reducing symptoms. Information about potential confounders, eg pelvic surgery, recent menopause, was sought. Short forms of the Incontinence Impact Questionnaire (IIQ) and Urogenital Distress Inventory (UDI) were incorporated into the survey. Each questionnaire was accompanied by a reply-paid envelope. A second questionnaire was mailed if the first wasn't returned.

Table 1. Outcome Categories

Status at last review (Improvement from baseline)	Category for analysis	Status at 5-10years (questionnaire)
>=75%	'Responded'	"Cured"
50-74%		"Helped a lot"
10-49%	'Not responded'	"Helped a little"
0-10%		"No help"

**Results**

The median age at symptom onset was 50 years (range 32-69) and at presentation was 60 years (40-74). Patients received a median of 2 (1-4) treatments over 8 (3-24) months.

Phasic vs non-compliant DO: Onset of symptoms was similar [52 years (32-70) vs 47 (32-67), MW-U (MW-U),P=0.56]. Bedwetting was more frequent in phasic DO [16/70 (23%) vs 3/51 (6%),  $\chi^2=6.42$ , p=0.01] vs non-compliant DO. This difference persisted at 510 years [8/40 (20%) vs 1/36 (3%),  $\chi^2=5.38$ , p=0.02]. No association was found between nocturnal enuresis in childhood and cystometric sub-type ( $\chi^2=0.14$ ,P=0.71). Response to treatment was similar at last clinic visit ( $\chi^2=0.04$ ,p=0.85) and at 5-10 years followup ( $\chi^2=0.09$ , p=0.75). As underlying cystometric sub-diagnosis did not influence outcome, both sub-types were combined for further analyses.

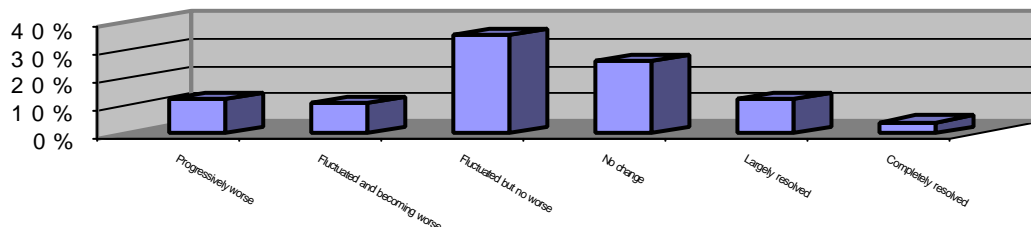
Outcome at last clinic review: As defined, 50-100% treatment response occurred in 49% of women (table 2). Treatment responders and non-responders first experienced symptoms at similar ages [respectively 53 years(30-68) vs 48 years( 33-70) , MW-U,p=0.97] and had disease of a similar duration [6.4 years (2.7 – 12.7) vs 5.7 years (2.1 – 10.8),MW-U=0.07]. Those who bed-wet in childhood ( $\chi^2=4.28$  p=0.04) and day-wet past age 5 ( $\chi^2=5.57$  p=0.02) were significantly more likely to be refractory to treatment. Of those having undergone hysterectomy, 56%(23/41) responded to therapy compared to 46%(42/91) of those who had not had a hysterectomy ( $\chi^2 =1.11$ ,p=0.29).

Table 2. Outcome by time and diagnostic sub-type

Last clinic review (N=132)		Questionnaire (N=71)	
Responded to Rx	Not responded	Responded to Rx	Not responded
65 (49%)	67 (51%)	25 (35%)	46 (65%)
Phasic 36 (55%)	Phasic 39 (58%)	Phasic N=14 (56%)	Phasic N=24 (52%)
NCDO 29 (45%)	NCDO 28 (42%)	NCDO N=11 (44%)	NCDO N=22 (48%)

Outcome at 510 years: The participation rate was 67%. Participants and non-participants were not significantly different for any baseline variable. Satisfactory response to treatment was reported by 25/71 (35%) women. Women that responded reported symptoms for less time than those who did not [10 years (7-16) vs 15 (10-18),MW-U,p=0.049.] Non-responders described urgency (p=0.02) and urge incontinence (p=0.001) more often at first consultation. No difference was noted in response amongst 14 (20%) patients who described recurrent cystitis ( $\chi^2=0.39$ ,p=0.53).

Figure2. Reported course of detrusor overactivity (N=74)



**Conclusions**

Phasic and non-compliant DO are similar as regards symptoms and prognosis. As per figure 2, only 16% of women reported improvement in symptoms over 5-10years. Childhood bedwetting and day-wetting are associated with poor outcome. Complete resolution of DO is unlikely (4%).