

Respondents were asked to respond to 4 hypothetical cases: scenario 1) uncomplicated stress incontinence, no previous surgery and failed conservative therapy; scenario 2) mixed stress and urge incontinence and failed conservative therapy, scenario 3) stress incontinence, straining to void and failed conservative therapy, scenario 4) stress incontinence with previous, failed incontinence surgery. Respondents indicated whether they had a special interest or held a sub-specialist qualification in urogynaecology and whether they would agree to participate in a randomised, controlled trial of urodynamics/no urodynamics in the pre-operative assessment of uncomplicated stress incontinence. Statistical analysis was by Chi square.

Results At the time of writing results are available for New Zealand (n=112, 66% response) and Australian (n=483, 46% response) gynaecologists only. Seventy-nine per cent of respondents surgically managed women with urinary incontinence with 64% indicating they often managed these cases surgically. Sixteen per cent of all respondents held either a subspecialist qualification or held a special interest in urogynaecology. Of all respondents who managed female urinary incontinence, 63% had ready access to urodynamics in their practice and 57% were interested in participating in a randomised, controlled trial of urodynamics or no urodynamics prior to first-time surgery for stress incontinence. The data in the table gives the percentage of replies from those who often see and treat women with urinary incontinence.

	SCC	MCC	UPP	VLP	UFM	VCU	AMB	Other	None
Availability	25	75	70	38	70	45	18	4	25*
Utilisation									
Scenario 1	6	36	29	16	33	15	5	8	46 [#]
Scenario 2	7	60	50	27	49	28	8	10	11 [#]
Scenario 3	7	58	52	26	51	29	6	12	14 [#]
Scenario 4	8	62	56	29	51	38	8	12	5 [#]

SCC = single channel cystometry, MCC = multi-channel cystometry, UPP = urethral pressure profilometry, VLP = Valsalva leak-point pressure, UFM = uroflowmetry, VCU = videocystourethrography, AMB = ambulatory, Other included bladder neck ultrasound, None = no test available* or would not use any urodynamic test[#]

For those performing incontinence surgery often, analysis by subspecialist /special interest vs general status revealed that a significantly greater proportion of subspecialists have ready access to urodynamic tests (86% vs 69%, p < 0.001), request urodynamic tests for uncomplicated stress incontinence (66% vs 50%, p = 0.01) and straining to void (93% vs 83%, p = 0.02) whereas there was no significant difference in utilisation of urodynamics for mixed incontinence (93% vs 87%, p = 0.15) or previous failed surgery (95% both groups, p = 0.8).

Results including the UK, USA and Canada will be presented at the meeting.

Conclusions A significant proportion of Australian and New Zealand practitioners who manage incontinent women surgically do not have ready access to urodynamic tests. Most practitioners utilise urodynamic tests in the pre-operative assessment of the more complex cases. However, many respondents would not have requested appropriate tests to adequately evaluate cases of possible obstruction or Intrinsic Sphincter Deficiency. There is no consensus regarding utilisation of urodynamics prior to surgery for uncomplicated stress incontinence even amongst those expressing a special interest status. This lack of consensus points to the need for a randomised, controlled trial to determine whether urodynamic testing improves the choice and outcome of surgery for incontinence.

References: available from Dr P Duggan

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HORMONAL INFLUENCES ON THE HUMAN FEMALE LOWER URINARY TRACT: A PROSPECTIVE EVALUATION OF THE EFFECTS OF THE MENSTRUAL CYCLE ON SYMPTOMATOLOGY AND THE RESULTS OF URODYNAMIC INVESTIGATION.

AIMS OF STUDY

There is increasing evidence from animal studies that sex steroids have an important role in the female continence mechanism. Oestrogen receptors are found throughout the brain cortex, limbic system, hippocampus and cerebellum and androgen receptors have been identified in the pontine micturition centre [1]. Oestrogens increase cell cycle activity in the trigone of the bladder and have a direct (non-genomic) effect on detrusor function through modifications of muscarinic receptors and inhibition of movement of extracellular calcium ions into muscle cells [2]. Oestradiol reduces the amplitude and frequency of spontaneous rhythmic contractions, which have been associated with detrusor instability, and oestrogen supplementation may increase the sensory threshold of the bladder. Recently, oophorectomy has been shown to alter the pressure flow characteristics of the female rat [3].

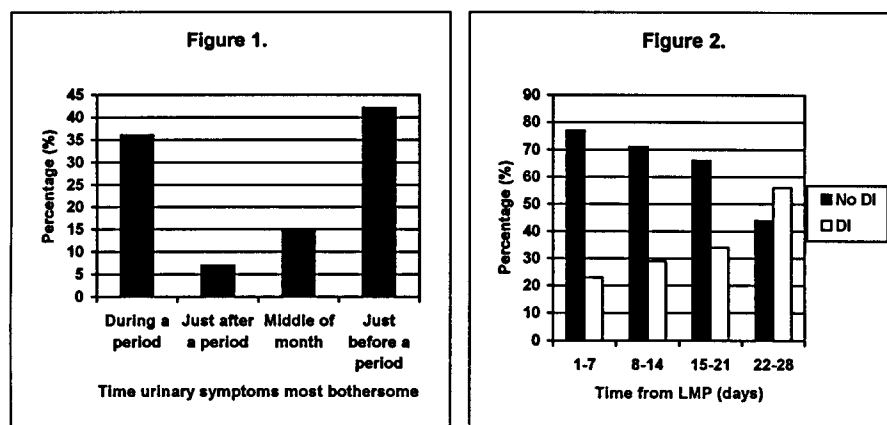
Our aim was to establish if cyclical changes in the level of circulating oestrogen and progesterone occurring during the menstrual cycle had a clinically significant effect on lower urinary tract symptoms in women and the results of urodynamic investigation.

METHODS

Consenting consecutive women referred to a urodynamic clinic for investigation were prospectively assessed by means of a structured questionnaire and videocystourethrography. Details of the patient's last menstrual period (LMP), menstrual pattern and use of hormonal therapy were obtained. Each patient was also asked to indicate if her urinary symptoms changed during the menstrual cycle, and if so when she felt they were the most bothersome. Urodynamic studies were performed on the same day using a standardized protocol. All definitions conform to those of the ICS.

RESULTS

520 women referred with urinary symptoms were evaluated of which 194 (37%) were premenopausal [mean age 38.4, SD (7.97)]. 149 (77%) premenopausal women had a regular menstrual cycle [16 (11%) were taking the combined oral contraceptive pill (coc)]. 45 (23%) women had an irregular menstrual pattern and were therefore excluded from further analysis. 55/133 (37%) premenopausal women with regular menses (not on coc or other hormonal therapy) complained that their urinary symptoms were cyclical with the worst times characteristically just before and during a period (Chi-Squared=20.5, $P=0.0001$). The time when urinary symptoms were most bothersome in relation to the last menstrual period is shown in figure 1.



The prevalence of detrusor instability diagnosed on videocystourethrography increased significantly with time from the last menstrual period and may reflect increases in the circulating level of progesterone following ovulation (Chi squared for trend=6.56, $P=0.01$). The changing prevalence of detrusor instability with respect to the patient's LMP is shown in figure 2.

CONCLUSIONS

To our knowledge this is the largest prospective study to examine the effect of the menstrual cycle on patient symptomatology and urodynamic diagnosis. Approximately one third of premenopausal women with regular cycles complain that their urinary symptoms change with the menstrual cycle, with the time before and during a period identified as the most bothersome. Hormonal changes during the menstrual cycle also influence the likelihood of detrusor instability being identified on videocystourethrography. These findings suggest that the menstrual cycle has a significant impact on human female lower urinary tract function with the timing of investigation an important factor in the detection of bladder overactivity in symptomatic women.

REFERENCES

1. Neurourol Urodyn 1998,17: 404-405
2. Neurourol Urodyn 1996,15: 325-326
3. Neurourol Urodyn 1998,17: 405-406