Table 2 Urodynamic characteristics in the 183 asymptomatic women with normal (n=160) and abnormal CMG (n=23) results (Mean±SD)

CMG (Sit)		CMG (Stand)	
FDV (ml)		FDV ml	
Normal CMG	206±102	Normal CMG	217±106*
Abnormal CMG	187±115	Abnormal CMG	187±115
SDV (ml)		SDV ml	
Normal CMG	302±136	Normal CMG	304±126
Abnormal CMG	391±125	Abnormal CMG	245±187
Maximum capacity (ml)		Maximum capacity ml	
Normal CMG	391±136	Normal CMG	374±131*
Abnormal CMG	380±158	Abnormal CMG	306±201
Residual urine	0ml		
PFR (ml/sec)			
Normal CMG	15.8±12		
Abnormal CMG	17.1±18		

* p <0.05

Conclusions: To the best of our knowledge this is the largest series of urodynamic studies performed on asymptomatic women. We found that the first desire to void (FDV), the second desire to void (SDV) and the maximum capacity were in accordance with the ICS standards and to other studies on asymptomatic women, though these studies were much smaller in number.
Statistically significant difference in volumes were seen in FDV and maximum capacity in stand fill stage between women with normal CMG versus women with an abnormal CMG which may indicate that the measurements in stand fill are more sensitive.
A lower incidence of detrusor instability (7%) was noted in our group of women in comparison to other studies on asymptomatic women(4,6). GSI was seen in 3.8% of women without urinary symptoms.
This study demonstrates that urodynamic studies do not always correlate with patient symptoms. Caution should be used in interpreting studies where there is disparity between symptoms and CMG results.

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THE AVAILABILITY AND UTILISATION OF URODYNAMIC INVESTIGATIONS BY GYNAECOLOGISTS FOR FEMALE URINARY INCONTINENCE

Aims of study Urodynamic investigations are currently recommended as part of the evaluation of female urinary incontinence, particularly prior to surgery. (1) There is doubt about this recommendation as the role of pre-operative, urodynamics has not been evaluated in a randomised, controlled trial. (2) There are few data on the availability and utilisation of urodynamics by specialists managing female urinary incontinence. A recent, small study indicated important areas of lack of agreement by specialists managing female urinary incontinence with respect to pre-operative evaluation of uncomplicated stress incontinence and management of Intrinsic Sphincter Deficiency. (3) The present, large survey reports the availability and utilisation of urodynamics in gynaecological practice in 5 countries.

Methods All registered practicing, specialist gynaecologists in Australia (n=1039), Canada (n=1000, approximately) and New Zealand (n=170) and a randomly selected sample of gynaecologists practicing in the USA (n=1000) and the UK (n=1000) were approached by postal questionnaire. Information on the availability of urodynamic investigations and the type of pre-operative, urodynamic investigations that the respondent would usually arrange was sought. Multiple options could be selected (see table).

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.