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Aim

To establish whether there is a link between nocturia and urodynamic findings in women.

Study design

- 3427 women completed a 5-day bladder diary. 42% of these women were classified as having nocturia.
- Student t-test used to compare results of free flow study and filling cystometry in women with nocturia and women without nocturia.
- Chi-squared test used to compare women with nocturia and without nocturia with final urodynamic diagnosis.
- Maximum bladder capacity was assessed using SPSS against increasing frequency of nocturia for each urodynamic diagnosis.

Results

- No significant differences in peak flow rate, voided volume or residual volume in women with nocturia and women without nocturia
- During the filling phase, there were no significant differences in the first desire to void or the detrusor pressure at the end of filling between groups.

	Nocturia	No nocturia
Free flow study		
Peak flow rate	16ml/hr	16ml/hr
Voided volume	188ml	189ml
Residual volume	35ml	30ml
Filling phase		
First desire to void	206ml	209ml
P _{det} at end of filling	15cmH ₂ O	16cmH ₂ O

Final Urodynamic diagnosis

Nocturia (%) vs No nocturia (%)

Urodynamic Stress Incontinence

No differences were observed in women with nocturia vs women without nocturia in those diagnosed with USI.

43% vs. 42%, p= 0.48

Detrusor overactivity

Women diagnosed with DO were more likely to have nocturia.

15% vs 12% ,p<0.05

Mixed urinary incontinence

Women diagnosed with MUI were more likely to have nocturia.

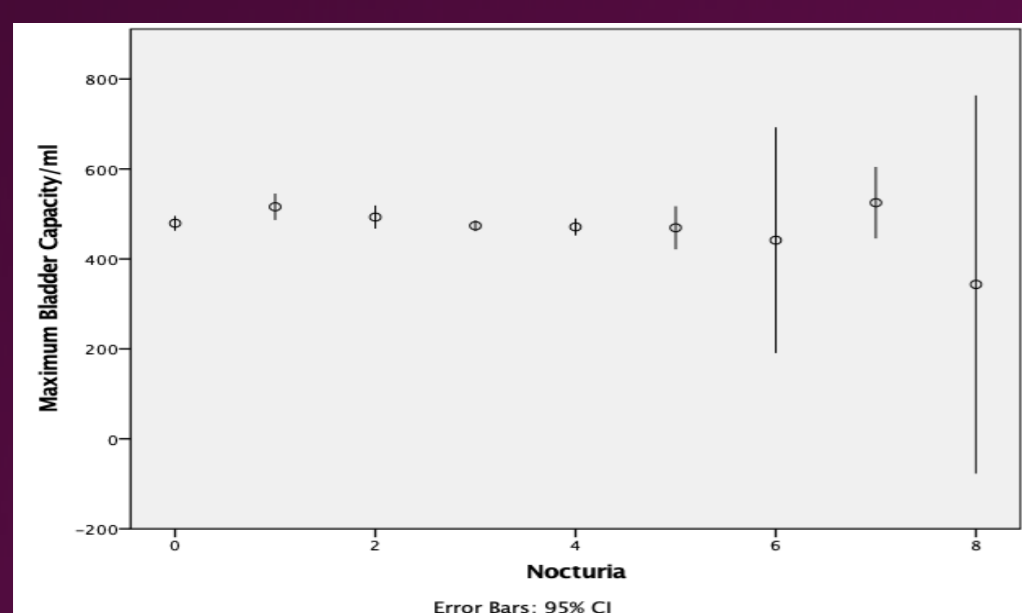
7% vs 4%, p<0.05

Bladder pain

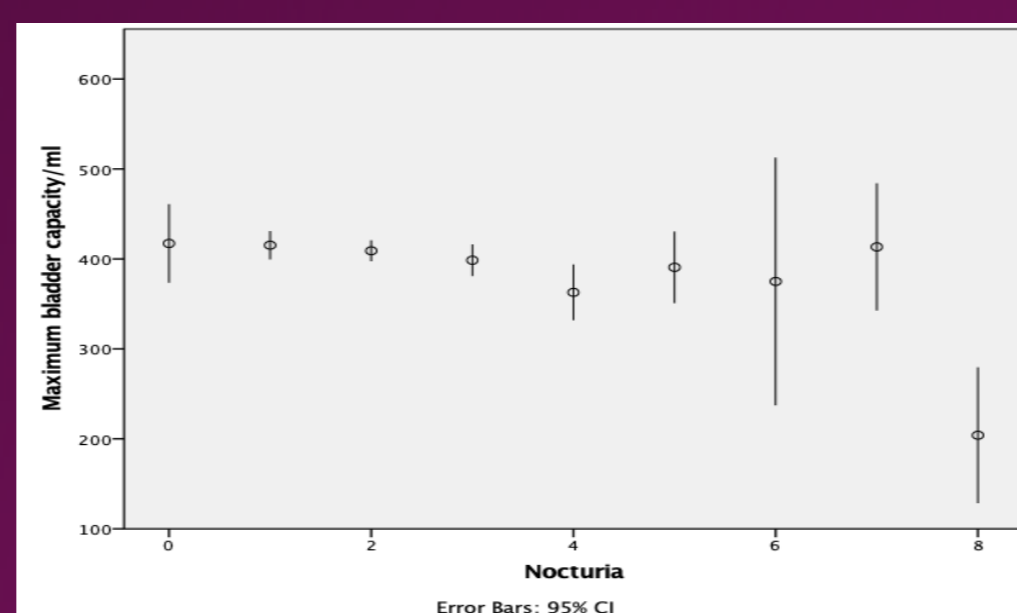
Women with bladder pain were more likely to have nocturia.

97% vs 53%, p<0.05

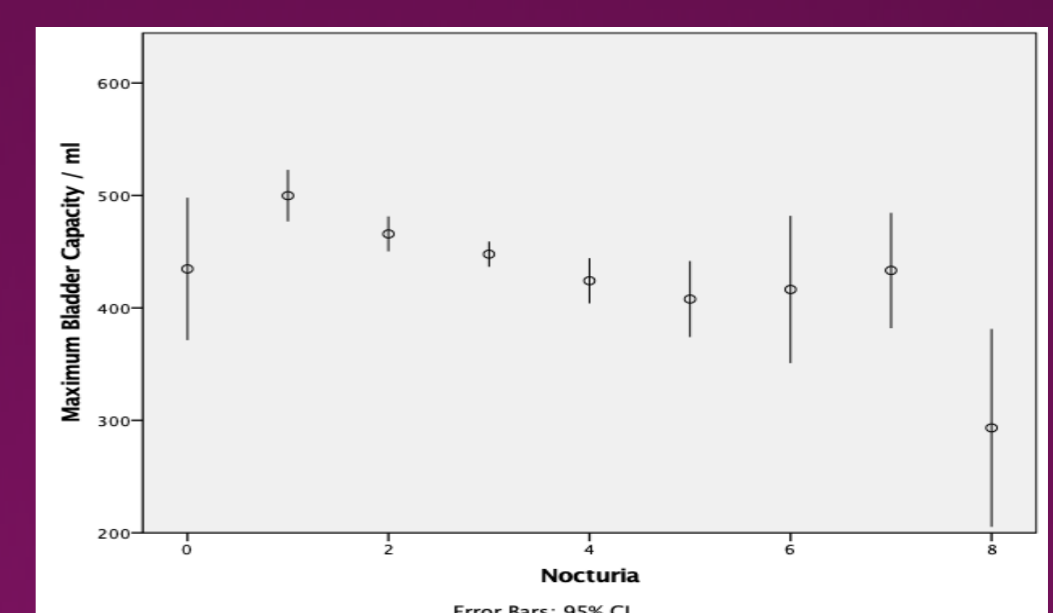
No difference in maximum bladder capacity with increasing frequency of nocturia in women with **Urodynamic Stress Incontinence**



No difference in maximum bladder capacity with increasing frequency of nocturia in women with **Detrusor Overactivity**



Reduction in maximum bladder capacity with increasing frequency of nocturia in women with **Bladder pain**



Conclusions

- The presence of nocturia in women does not affect the results of the free flow study or the filling phase.
- Nocturia is a feature in women with detrusor overactivity and mixed urinary incontinence but not urodynamic stress incontinence.
- Women with nocturia were demonstrated to have a high prevalence of bladder pain during filling and were found to have reduced bladder capacity with increasing frequency of nocturia.