

## URINARY RETENTION IN WOMEN: A RETROSPECTIVE STUDY OF ITS CAUSES AND TREATMENT

### Hypothesis / aims of study

Urinary retention in women is an uncommon and difficult condition to diagnose. The aim of this audit was to elucidate the pattern of referral of women with retention, their diagnosis and their eventual management.

### Study design, materials and methods

A retrospective audit was undertaken of all women with urinary retention referred to a specialist centre. Aspects investigated included source of referral by speciality, geographical location, investigations undertaken at the specialist centre, and diagnosis reached. Outcomes for management are also described.

In the 3 years period (2001-2003), 176 women with urinary retention were referred by urologists or neurologists, having seen on average 3 specialists prior to being seen at our centre. Presenting complaints included complete retention, partial retention and obstructed voiding or recurrent urinary tract infections. The women were typically young (mean age 34.9 years, range 12 – 81) and had been extensively investigated urologically and neurologically elsewhere.

### Results

The women were investigated at our centre with a flow rate and residual volume, urethral pressure profile (69%), sphincter volume (56%) and sphincter EMG (44%).

The majority (102/176, 58%) had evidence of the primary disorder of sphincter relaxation (a disorder hypothesised to be due to a hormonally sensitive channelopathy), on the basis of sphincter EMG (66 women) or sphincter volume and urethral pressure profile measurements without EMG (36 women). Other causes of retention are described in Table 1.

Cause of retention	No. of women (%)
Primary abnormality of Sphincter relaxation	102(58%)
Associated with severe constipation (?Chronic Idiopathic Pseudo-obstruction)	7 (4%)
Associated with high opiate intake	2 (1%)
Detrusor Failure	4(2%)
Urethral Pain	3(2%)
Neurological disease	2 (1%)
No definitive diagnosis	56 (33%)

The treatment options for these women are limited. Most either perform intermittent self catheterisation or have indwelling catheters (suprapubic or urethral). The only treatment found to be effective in restoring micturition is sacral nerve stimulation (SNS). Twenty-seven women have undergone the test procedure for SNS, with success in only 11 women. In the last 3 years, three women have had the original procedure for implanting the InterStim System and 15 are waiting for the new 'two stage' procedure.

### Interpretation of results

Our results show that women were seen by multiple specialists prior to referral to a centre with an interest in investigating women with retention. Investigations of urethral pressure profile, urethral sphincter volume and sphincter EMG are required to diagnose the cause of retention, but despite these tests the diagnosis remains elusive in one third of patients.

Treatment options are currently limited to catheterisation or neuromodulation, which is only used at this centre for women with the primary disorder of sphincter relaxation. Neuromodulation requires intensive input both by patients and physicians and is therefore unsuitable for non compliant patients or those with a difficult journey. The success rate of the test procedure of SNS has been approximately 40% at this centre and if voiding is restored, these women are then eligible for a stimulator implant. Local resource difficulties have meant that only 3 women have had implants in the last 3 years, while a further 15 now await surgery.

**Concluding message**

Specialist investigations are needed to investigate urinary retention in women and on the basis of urethral sphincter EMG, urethral pressure profile and sphincter volume the commonest cause in young women is a primary disorder of sphincter relaxation. Sacral nerve stimulation is the only treatment found to restore voiding that is otherwise managed by catheterisation.

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