

Evaluation of Urethral Retro-Resistance Pressure As a New Diagnostic Tool For Stress Urinary Incontinence

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Obstetrics and Gynaecology

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

وَقُلْ أَعْمَلُوا فَسِيرَی اللَّهِ عَمَلَكُمْ وَرَسُولُهُ

وَالْمُؤْمِنُونَ ^{صلى} وَسُتَرَدُّونَ إِلَىٰ عَالِمِ الْغَيْبِ

وَالشَّهَادَةِ فَيُنَبِّئُكُمْ بِمَا كُنْتُمْ تَعْمَلُونَ ﴿التوبة ١٠٥﴾

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Abstract

- **KEYWORDS**

Stress urinary incontinence – urethral retro-resistance pressure
– maximum urethral closing pressure

- **OBJECTIVE**

Aim of the study was to correlate urethral retro resistance pressure (URP) with the maximum urethral closure pressure (MUCP) in patients with urinary incontinence and healthy individuals.

- **STUDY DESIGN**

Eighty patients with the complaint of urinary incontinence had a urodynamic examination including urethral pressure profiles and URP. Additionally, 40 healthy individuals without the complaint of any incontinence had their URP and urethral pressure profiles measured. The correlation of MUCP, and URP were calculated.

- **RESULTS**

URP correlates well with the diagnosis of urodynamic stress incontinence. Correlation coefficient between URP and MUCP is 0.74. Healthy individuals have significantly higher values for URP and MUCP.

- **CONCLUSION**

URP is a valuable less invasive test than conventional urethral function tests for the diagnosis of urodynamic incontinence with an excellent correlation of MUCP and URP.

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List of Abbreviations

AHCPR	Agency for Health Care Policy and Research
ATFP	Arcus tendineus fascia pelvis
ATRV	Arcus tendineus rectovaginalis
CT	Computed Tomography
EAS	External anal sphincter
EMG	Electromyography
EUL	External urethral ligament
FUL	Functional urethral length
ICS	International Continence Society
IS	Ischial spine
ISD	Intrinsic urethral sphincter deficiency
IVP	Intravenous Pyelography
LMA	Longitudinal muscle of the anus
LP	Levator plate
MRI	Magnetic Resonance Imaging
MUCP	Maximum urethral closure pressure
PAP	Postanal plate
PCF	Pubocervical fascia
PCM	Pubococcygeus muscle
PM	Perineal membrane
POP-Q	Pelvic Organ Prolapse - Quantification
PTR	Pressure transmission ratio
PUL	Pubourethral Ligament

P_{ura}	Urethral pressure
PUV	Posterior urethra-vesical angle
P_{ves}	Intravesical pressure
PVL	Pubovesical ligament
UPP	Urethral pressure profile
URP	Urethral retro-resistance pressure
USL	Uterosacral ligament
VCUG	Voiding cystourethrography

Introduction

Urinary incontinence is a distressing condition which although rarely life-threatening, adversely affects all aspects of a woman's quality of life. Through ignorance, embarrassment and a belief that loss of bladder control is a 'normal' result of childbirth and ageing many women suffer for years before seeking help (**Norton et al. 1998**). This is unfortunate because with appropriate investigations an accurate diagnosis can be made and many women can be cured, most improved, and all helped by various different management strategies.

Urinary incontinence is defined by the International Continence Society (ICS) as any involuntary loss of urine. Conversely, continence is the ability to hold urine within the bladder at all times except during micturition (**Abrams et al. 2002**). Both continence and micturition depend upon a lower urinary tract, consisting of the bladder and urethra, which is structurally and functionally normal, that are normally situated and supported within the pelvis. In order to understand urinary incontinence in women it is necessary to have a basic knowledge of the structure and function of the lower urinary tract.

Aim
of The
Study