Does Ethnicity Make a Difference to Pre-operative Urodynamics Before Continence Surgery?

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INTRODUCTION

There are a number of studies which suggest that urodynamics do not alter the continence surgery outcome for those with stress predominant incontinence. A systematic review and meta-analysis looked at four randomised controlled trials to assess whether preoperative urodynamics improves outcomes for women undergoing surgery for stress urinary incontinence (SUI) (1).

Based on these 4 RCTs the authors concluded that in women undergoing primary surgery for SUI or stress-predominant mixed urinary incontinence without voiding difficulties, urodynamics does not improve outcomes as long as the women undergo careful office evaluation (including uroflowmetry and postvoid residual).

Two of the four trials have reported a high bias of over 80% white Caucasian participants. If there is an impact of ethnicity on the stress predominant women, this will mean that urodynamics may have a place in these groups.

The aim of our study was to assess the urodynamic findings in women with lower urinary tract symptoms, in particular predominant stress urinary incontinence in our ethnically diverse inner-city population.

METHODS

- Women attending a tertiary centre urogynaecology service with lower urinary tract symptoms were seen and assessed clinically.
- Patients were asked to complete a 3-day bladder diary, the ICIQ-FLUTS symptoms questionnaire and underwent standard saline urodynamics.
- Clinical diagnosis was made based on history, examination, 3-day bladder diary and the ICIQ-FLUTS questionnaire.
- Urodynamic diagnosis was based on IUGA/ICS definitions and parameters.
- Ethnicity was self-reported then coded according to NHS ethnic category codes (White, Mixed, Asian, Black, Other).

CONCLUSIONS

- Ethnicity may have an impact on urodynamic diagnoses in women with stress predominant mixed urinary incontinence.
- Urodynamics have an important role in pre-operative work up before continence surgery.
- Any investigation to increase knowledge and aid decision making about individual treatment options should be embraced.

REFERENCES

- 1. BJOG 2015;122:8-16

RESULTS

A total of 929 women were recruited and retrospective analysis was carried out. Patients without complete data were not included in the analysis. The mean age was 53yrs (range 20-84) and the mean BMI was 27 (range 15-47). Percentage frequencies of NHS ethnic groups are shown in table 1.

Ethnicity was dichotomised into white (600, 64.1%) and non-white (329, 35.1%) groups.

Based on clinical history, examination and responses to the ICIQ-FLUTS questionnaire, patients were divided into the following clinical groups: overactive bladder(OAB), stress urinary incontinence (SUI), mixed urinary incontinence (MUI), voiding dysfunction (VD) and bladder pain syndrome(BPS). There was a significant difference in clinical diagnosis between the white and non-white groups (Chi squared 16.1 , p 0.003). Urodynamic diagnoses were classified as detrusor overactivity (DO), urodynamic stress incontinence (USI), bladder pain (BPS), inconclusive or mixed urinary incontinence (MUI). These also differed significantly among the white and non-white groups (Chi Squared 37.7 , p 0.0001).

Percentage frequencies of clinical and urodynamic diagnoses in the 2 ethnic groups are displayed in the table 2.

In the MUI clinical group, SUI was predominant in 31.8%. In this particular group USI was significantly higher in the white group (n=36) compared to the non white group (n=4) (Chi squared 11.3, p 0.01).

The results of this study have demonstrated that when comparing white and non-white ethnic groups there is a significant difference in both clinical and urodynamic diagnosis.

ETHNICITY CODE	PERCENTAGE (%)
WHITE	64.5
MIXED	1.5
ASIAN	11.4
BLACK	9.9
OTHER	12.7

Table 1: Percentage frequencies of different ethnic groups

Clinical group	White (%)	Non-white (%)
OAB	28.0	26.3
SUI	18.3	9.0
Mixed	51.0	60.7
VD	1.7	1.7
BPS	1.0	2.3
UDS group	**White (%)**	**Non-white (%)**
DO	34.2	48.9
USI	21.9	10.2
Bladder pain	0.8	3.4
Inconclusive	23.1	20.1
Mixed	20.0	17.3

Table 2: percentage frequencies of clinical and urodynamic diagnoses