

## SYMPTOMATIC AND QUALITY OF LIFE CORRELATES OF LOWER URINARY TRACT SYMPTOMS IN WOMEN WITH DIABETES MELLITUS (DM)

### Hypothesis / aims of study

DM has reached epidemic proportions worldwide. There are no studies that assess the impact of lower urinary tract symptoms on quality of life in women with DM<sup>1</sup>. The aim of this study is to assess the prevalence and impact of lower urinary tract symptoms (LUTS) on quality of life in diabetic females, and its relation to age, diabetes mellitus (DM) type, duration of DM, diabetic control, use of insulin and presence of neuropathy.

### Study design, materials and methods

110 women attending a diabetes clinic in a District General Hospital were recruited into this study. 43 women had type I DM and 67 women had type II DM. LUTS and their impact on quality of life was assessed using the King's Health Questionnaire and International Consultation on Incontinence-Female Lower Urinary Tract Symptom Questionnaire (ICIQ-FLUTS). Free flow rate and residuals were obtained. Women were divided on those with bothersome and non-bothersome LUTS the King's Health Questionnaire. In addition, women were divided into normal and abnormal voiding parameters based on urinary flow shape and peak flow rate.

### Results

44 women with type 2 DM and 30 with type 1 DM completed the study. 30 women (40.5%) had bothersome LUTS. Women with bothersome LUTS were more likely to have type 2 DM ( $P=0.021$ ) and shorter duration of DM ( $P=0.027$ ). There were no differences in age, parity, BMI, insulin use, smoking, neuropathy, and glycosylated haemoglobin level between the two groups. The most bothersome symptoms in type 2 DM were urgency incontinence, followed by urgency, nocturia, straining, frequency and stress incontinence. 19 (25.6%) women had evidence of voiding dysfunction. Patients with voiding dysfunction were more likely to have type 1 DM ( $p=0.015$ ), longer duration of DM ( $p=0.027$ ), peripheral neuropathy ( $p=0.01$ ) and higher HbA1c ( $p=0.01$ ) compared to women with normal voiding. Logistic regression model showed that women with type 2 DM were 3.59 more likely to have bothersome LUTS, and women with peripheral neuropathy were 6.5 time more likely to suffer from voiding dysfunction.

### Interpretation of results

Diabetic women with LUTS reported bladder storage symptoms as the most bothersome. Voiding dysfunction was mostly asymptomatic and associated with peripheral diabetic neuropathy.

### Concluding message

Bothersome LUTS are common in women with DM and the assessment of impact of these symptoms on quality of life should be part of the routine care of these patients.

### References

1. Journal of the American Geriatrics Society. 2005 Nov;53(11):1851-7.

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<b><i>Is this a clinical trial?</i></b>	<b>No</b>
<b><i>What were the subjects in the study?</i></b>	<b>HUMAN</b>
<b><i>Was this study approved by an ethics committee?</i></b>	<b>Yes</b>
<b><i>Specify Name of Ethics Committee</i></b>	<b>Lancashire and Cumbria Local Research Ethics Committee</b>
<b><i>Was the Declaration of Helsinki followed?</i></b>	<b>Yes</b>
<b><i>Was informed consent obtained from the patients?</i></b>	<b>Yes</b>