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FIGURE 1. DURATION OF DIABETES MELLITUS ACCORDING TO TYPE OF DM AND PRESENCE OR ABSENCE OF THE LOWER URINARY TRACT SYMPTOMS (LUTS)

Hypothesis / aims of study

Treatment of diabetic cystopathy may be complicated by frequently occurring coexisting urologic conditions The aim of our study was to establish the influence of diabetes mellitus (DM) on the development or presence of lower urinary tract symptoms (LUTS) and bladder outlet obstruction (BOO).

Study design, materials and methods

94 diabetic patients (cross-sectional study) mean age 53 ± 13yrs were investigated by: Frequency-Volume Chart, neurological examination, electromyography of lower extremities (EMG), digito-rectal examination, urinoculture, ultrasound examination including prostatic weight, detrusor wall thickness, and PVR, and urodynamic examination. The patients were classified based on presence or absence of LUTS. Of the 94 diabetic patients 43 patients had LUTS (symptomatic group) and 51 patients were without LUTS (asymptomatic group). ICS nomogram was used as a criterion for diagnosis of the bladder outlet obstruction. BOO was defined as a sustained detrusor contraction of greater than 40 cm water, a catheterized urine flow rate of less than 12ml /sec. Table I. Patient's age, age, body mass index (BMI) and duration of diabetes mellitus (DM) in different types of DM.

	Type 1	Type 2	
DM	x ± SD	x ± SD	p-value
Patients' age (years)	34.83 ± 8.75	58.11 ± 8.58	p=0.000
BMI (kg/m²)	21.86 ± 1.86	28.1 ± 2.79	p=0.016
Duration of DM (years)	14 ± 7.6	8.7 ± 6.3	p=0.004

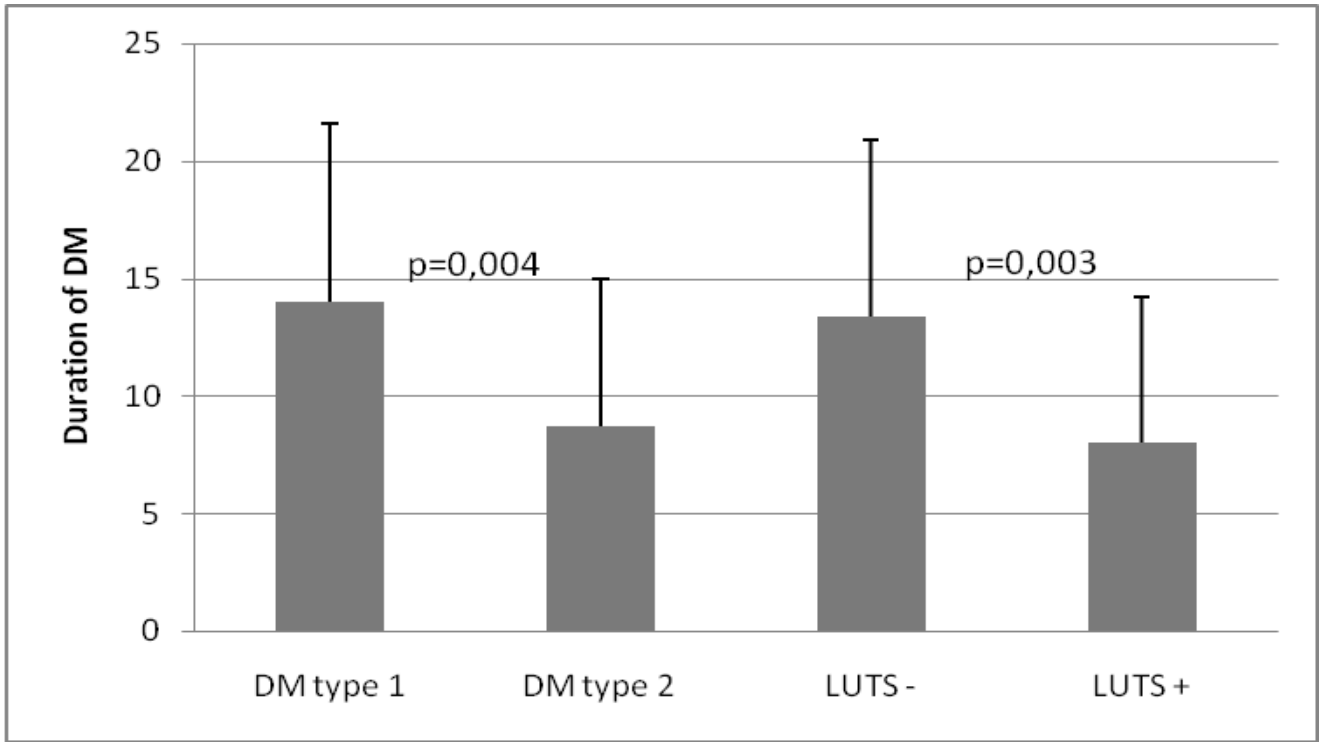
Results

BOO was present in 6 men (11,76%) without LUTS and in 20 men (46,51%) with LUTS using pressure-flow-EMG study ($p<0.01$). One-way analysis of variance revealed that duration of DM had no influence on onset of BOO ($p=0.23$) and on onset of voiding symptoms in men ($p=0.68$), but it significantly influenced the onset of increased daytime fequency and nocturia in men. BOO had no influence on onset of storage symptoms ($p=0,12$), but it significantly influenced the onset of voiding symptoms ($p<0.01$).

Interpretation of results

Diabetes may affect storage more than voiding function in men. Alterations of proprioceptive sensations of the bladder and increased PVR by diabetes are a probable hypothesis to explain these findings.

Figure 1. Duration of diabetes mellitus according to type of DM and presence or absence of the lower urinary tract symptoms (LUTS)



Concluding message

Duration of DM does not have influence on onset of BOO. Perception of voiding difficulties by diabetics indicate onset of BOO.

Disclosures

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