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IS THERE ANY DIFFERENCE IN DETRUSOR OVERACTIVITY BETWEEN DIABETIC AND NON-DIABETIC FEMALE PATIENTS?

Hypothesis / aims of study

there are a variety of bladder dysfunctions due to diabetes mellitus, described as diabetic cystopathy. The main findings are: decreased bladder sensation, increased bladder capacity, detrusor overactivity, urinary incontinence and decreased bladder contractility. The aim of study is to compare urodynamic findings from diabetic and non-diabetic patients regarding detrusor overactivity.

Study design, materials and methods

Material and Methods: A retrospective and descriptive analysis was made of urodynamic studies performed between 2001 and 2012. We obtained 52 urodynamic studies of female non-diabetic patients with idiopathic overactive detrusor and 51 female diabetic patients with overactive detrusor. Urodynamic consisted of filling cystometry at rate of 50 mL/min and voiding cystometry. Urodynamic parameters measured included: first desire to void (FDV), normal desire (ND), maximum cystometric capacity (MCC), volume at first involuntary detrusor contraction (VFIC), maximum involuntary detrusor contraction (MIC), Qmax, PdetQmax, postvoid residual (PVR).

Results

Findings from the Urodynamic studies are listed in table 1.

Urodynamic parameters	Diagnosis	Mean (SD)	p
Age	Diabetic	64,7 (9,6)	0,802
	Non-diabetic	66,6 (10,9)	
FDV	Diabetic	110,8 (57,7)	0,029
	Non-diabetic	84,2 (47,6)	
ND	Diabetic	171,9 (74,8)	0,070
	Non-diabetic	148,5 (70)	
MCC	Diabetic	284,6 (100,2)	0,129
	Non-diabetic	258,9 (126,6)	
VFIC	Diabetic	183,1 (98,1)	0,070
	Non-diabetic	126,5 (82,4)	
MIC	Diabetic	37,2 (17,5)	0,825
	Non-diabetic	40,5 (31,5)	
Qmax	Diabetic	16,5 (11,7)	0,222
	Non-diabetic	12,5 (7,1)	
PdetQmax	Diabetic	30,1 (14,5)	0,028
	Non-diabetic	37,3 (18,8)	
PVR	Diabetic	35,5 (59,2)	0,151
	Non-diabetic	55,9 (78,1)	

Table 1. urodynamic parameters. U Mann-Whitney test

First desire to void occurs later in diabetic patients (110 mL vs 84 mL) (p=0,029). PdetQmax is lower in diabetic patients (30 cmH2O vs 37 cmH2O) (p=0,028). There are no differences in the other parameters

Interpretation of results

Our findings reported here show that detrusor overactivity in female diabetic patients had a delayed first desire to void and impaired detrusor contractility similar to those reported in other studies [1,2]. These findings could mean that our patients had evolved diabetes. Experimental animal models have shown the time-dependent changes of diabetic cistopathy, because decompensation of bladder tissue and function due to accumulation of toxic metabolites with time [3].

Concluding message

Detrusor overactivity is similar in female diabetic and non-diabetic patients. Diabetic patients show reduced bladder sensation and impaired voiding function. Further prospective studies will provide information about cistopathy in diabetic patients.

References

1. Tomasz Golabek, Eamonn Kiely and Barry O´Reilly. Detrusor overactivity in diabetic and non-diabetic patients: Is there a difference?. Int Braz J Urol.2012;38:652-60
2. Chen-Hsun Ho, Huai-Ching Tai and Hong-Jeng Yu. Urodynamic findings in female diabetic patients with and without overactive bladder symptoms. Neurourol Urodyn. 2010;29:424-7
3. Ruth Kirschner-Hermanns, Firouz Daneshgari, Baharel Vahabi et al. Does diabetes mellitus-induced bladder remodeling affect lower urinary tract function?:ICI-RS 2011.Neurouro 2012;31:359-64l Urodyn.

Disclosures

Funding: no **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** The study is based in normal urodynamic procedures in our patients. We have collected the urodynamic´s parameters **Helsinki:** Yes **Informed Consent:** Yes