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Title (type in CAPITAL LETTERS): NON-INVASIVE UROLOGIC SCREENING FOR ASYMPTOMATIC DIABETIC CYSTOPATHY

AIMS OF STUDY

The purpose of our study was to determine the prevalence of asymptomatic diabetic cystopathy in diabetic patients without invasive urodynamic evaluation. We are interested in the role of urologic screening for diabetic cystopathy.

METHODS

sixty-five non-insulin-dependent diabetic patients without any urological symptoms were prospectively evaluated. There were 48 males and 17 females with mean age of 55.8 years (range 37-79).

Mean duration of diabetes was 8.0 years. Mean serum HbA1c was 7.1%. Bladder capacity was determined by voiding diary and uroflowmetry. Residual urine volume was estimated by ultersonography. Age, duration of diabetes, plasma creatinine, HbA1c, glomerular filtration rate, grade of retinopathy, motor nerve conduction velocity, sensory nerve conduction velocity and CV-RR were correlated with bladder capacity and residual urine volume using the non-parametric Spearman rank test.

RESULTS

Mean bladder capacity was 427.9±192 ml (150-1000 ml) and mean residual urine volume was 32.7 ±95 ml (0-550 ml). Bladder capacity was significant increased in patients with decreased motor nerve conduction velocity (p=0.049) and sensory nerve conduction velocity (p=0.029). Bladder capacity was increased in patients with elevated HbA1c. Residual urine volume was significantly elevated in patients with decreased motor nerve conduction velocity (p=0.017).

CONCLUSIONS

The existence of peripheral neuropathy were useful for screening of diabetic cystopathy, especially for enlarged bladder capacity. The correlation between increased bladder capacity and elevated residual urine volume with decreased moter nerve conduction velocity and sensory nerve conduction velocity is similar to previous reports of correlation

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between invasive urodynamic findings and diabetic cystopathy. Our results supports non-invasive screeing for diabetic cystopathy in diabetic patients without urological symptoms.

TABLE

Correlations between bladder capacity
(the non-parametric Spearman rank test)

age	.70
duration of diabetes	.28
plasma creatinine	.16
HbA1c	.03
glomerular filtration rate	.88
retinopathy	.29
motor nerve conduction velocity	.49
sensory nerve conduction velocity	.03
CV-RR	.13

Correlations between residual urine volume
(the non-parametric Spearman rank test)

age	.25
duration of diabetes	.24
plasma creatinine	.11
HbA1c	.97
glomerular filtration rate	.54
retinopathy	.54
motor nerve conduction velocity	.017
sensory nerve conduction velocity	.057
CV-RR	.13