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THE ASSOCIATION BETWEEN POSTVOID RESIDUAL VOLUME (PVR) AND NEPHROPATHY IN TYPE 2 DIABETES BUT WITHOUT VOIDING SYMPTOMS.

Hypothesis / aims of study
The purpose of this study was to determine the association between PVR and microvascular complications in patients with type 2 diabetes but without voiding symptoms.

Study design, materials and methods
A total of 35 consecutive patients (17 males and 18 females, age 61.7±10.0 years, diabetes duration 12.1±7.6 years) with documented type 2 diabetes, low scores at the International Prostate Symptom Score (IPSS) < 12 and no subjective complaint of voiding problems were included in the study. PVR of more than 50 ml on 2 consecutive voids when total volume ≥ 150ml was considered to be abnormal. We evaluated the level of serum HbA1c, the accompany with diabetic neuropathy, retinopathy and nephropathy in the study patients.

Results
The scores on IPSS ranged from 0 to 11, with a mean of 3.7±3.3. Five patients had PVR of more than 50 ml. PVR was slightly, but not significantly, higher in patients with diabetic neuropathy, retinopathy or nephropathy. Patients with PVR more than 50 ml had significantly lower glomerular filtration rate (GFR) than those with PVR less than 50 ml (62.6±22.5 vs. 22.5±4.1 mL/min/1.73m^2, p<0.001). There was statistically high negative correlation between PVR and GFR (r=-0.34, p=0.04). In patients without proteinuria, no one showed PVR more than 50 ml, but one (16.7%) patient with microalbuminuria and four (33.3%) patients with proteinuria showed PVR more than 50 ml. Patients with diabetes in duration of longer than 10 years (p=0.049) and those with insulin therapy (p=0.038) tended to have significantly higher PVR, more than 50 ml. The multivariate analysis indicated that GFR was the only risk factor related independently to high PVR (p=0.03).

Interpretation of results
GFR was the only risk factor related independently to higher PVR in patients with type 2 diabetes but without voiding symptoms.

Concluding message
PVR, when GFR is decreased, might be used to screen and treat earlier for some components of diabetic cystopathy or voiding dysfunction in its asymptomatic phase.

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Hallym University Kangnam Sacred Heart Hospital Ethics Committee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**