

UNDERACTIVE BLADDER IN DIABETES MELLITUS TYPE 2: TREATMENT BY INTRAVESICAL INSTILLATION OF PROSTAGLANDIN F2 ALPHA. PRELIMINARY STUDY

Hypothesis / aims of study

The spectrum of diabetic cystopathy comprises involuntary bladder contraction, underactivity, and acontractile bladder. The incidence of underactive diabetic bladder ranged 17% - 72%. Different modalities of therapy were tried with limited success. The few experimental and clinical reports of the role of urinary prostaglandin in modulating detrusor function raise the question for this clinical study.

The aim of this clinical study is to establish the value of prostaglandin F2 alpha in the treatment of underactive bladder in non-insulin dependant diabetic patients

Study design, materials and methods

A total of 68 diabetic patients presented with median age (44.34±16.43) were enrolled in this study between September 2007 and October 2009. These patients had a known history of Non Insulin Dependant Diabetes Mellitus (NIDDM) for at least 10 years duration. They were presented with difficulties in emptying bladder and had urodynamically-proven diagnosis of neuropathic underactive bladder.

The inclusion criteria included; sense of incomplete emptying/ difficulties in micturition, significant post-void residue ≤ 300 ml, enlarged vesical capacity, normal/ high compliance and/or maximum detrusor pressure ≥25 cm/H₂O. Patients with Bilharzial bladder, previous bladder surgeries as well as pathological and neurological status were excluded. Patients proved to have flow curve suggesting obstruction on initial uroflowmetric screening were also excluded. All patients were treated with intravesical administration of 2 ml prostaglandin F2 alpha diluted in 60 ml saline+ gentamycin, retained in the bladder for at least 2 hours.

Results

Overall improvement of the urinary symptoms was reported in 65%- 80% of our patients. The symptom of difficult micturition was found among 57 patients of the study group. The post-instillation improvement was detected in 80 %, 65 % and 22 % of these patients respectively. Symptoms of incomplete emptying, weak stream, continuous dribbling were showed insignificant statistical difference.

Patients with PVR (120-200 ml) showed an incidence of 78 % improvement at one week, whereas patients with PVR (200-300) ml showed an incidence of 53 % improvement at one week follow-up.

Post-instillation re-assessment revealed improvement in the voiding detrusor pattern in 82%, 63%, and 33% of the patients at consecutive periods respectively.

Interpretation of results

A total of 68 diabetic patients presented with median age (44.34±16.43) were enrolled in this study between April 2005 and September 2007. These patients had a known history of Non Insulin Dependant Diabetes Mellitus (NIDDM) for at least 10 years duration. They were presented with difficulties in emptying bladder and had urodynamically-proven diagnosis of neuropathic underactive bladder.

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Concluding message

Timed regular Prostaglandin F2 alpha as intravesical local therapy is considered a minimally invasive, simple, cheap, effective therapeutic option for diabetic underactive cystopathy. Further evaluation regarding control of diabetes and duration's effect is still needed.

Specify source of funding or grant

None

Is this a clinical trial?

No

What were the subjects in the study?

NONE
