THE ROLE OF URODYNAMIC STUDY IN EVALUATION OF PATIENTS WITH REFRACTORY MONOSYMPTOMATIC NOCTURNAL ENUREIS

Hamdy Mohmed Ibrahim(1), Hussein Abdel-Hameed Aldaqadossi(2), Hamada Ahmad Youssof(3), Islam Ali Elsiad Ahmed(4)

(1)Professor and Head of urology Department, Fayoum University
(2)Assistant professor of urology, Fayoum University
(3)Lecturer of urology, Fayoum University
(4)Department of urology

Corresponding author: Islam Ali Elsiad Ahmed
E-mail: islam.zon35@gmail.com
Tel: 01002428767

ABSTRACT:

The monosymptomatic nocturnal enuresis (MNE) is recommended by the International Children’s Continence Society (ICCS) to distinguish MNE from non-monosymptomatic nocturnal enuresis (NMNE), which is accompanied by lower urinary tract symptoms (LUTS) such as daytime urinary frequency, urgency, or urinary incontinence. In general, indications for urodynamic studies (UDS) in children include the following: neurogenic bladder, sphincter dysfunction, anorectal malformations, voiding dysfunction including urge syndrome and underactive bladder, vesicoureteral reflux, urinary incontinence, infravesical obstruction, or obstructive uropathy. This study aimed to evaluate the role of UDS in management of refractory monosymptomatic nocturnal enuresis. This prospective study was carried out in Urology Department, Fayoum University Hospital from December 2017 to August 2018. Thirty patients with refractory MNE were enrolled in the study. The included patients with MNE were treated with mono pharmacotherapy (desmopressin) for at least six months without response. Our results show no statistically significant correlation between normal and abnormal filling cystometry.

KEY WORDS: Monosymptomatic nocturnal enuresis (MNE), urodynamic studies (UDS), detrusor overactivity (DO).

INTRODUCTION:

Nocturnal enuresis (NE) is defined as intermittent incontinence of urine, or bedwetting during sleep, in children more than 5 years of age. (1). It is a condition that includes a spectrum of disorders with different underlying pathophysiological mechanisms. (1,2) Available evidence suggests that the major undarlying factors for NE are nocturnal polyuria, small bladder capacity, detrusor overactivity and a high arousal threshold. (1-3) UDS evaluations in NE management are unclear and controversial. Some investigators, have demonstrated the usefulness of urodynamic evaluation in children with severe NMNE or therapy-resistant NE, and have suggested UDS...
evaluations for children that require extra care. 
(4, 5) It was thought that patients with a 
diagnosis of MNE had normal bladder 
function. Thus, invasive UDS was not 
generally performed in children in order to 
manage MNE. However, several studies have 
revealed an important role of the reduced 
functional bladder capacity and bladder 
dysfunction in the progression of refractory 
MNE. (4,6) Therefore, this study sought to 
determine whether or not a UDS is beneficial 
for NE management in pediatric patients, 
especially in cases of pharmacoresistant MNE 
(PRMNE).

AIM OF STUDY:

This study aimed to evaluate the role of UDS 
in management of refractory 
monosymptomatic nocturnal enuresis (MNE).

MATERIALS AND METHODS:

A total of 30 refractory monosymptomatic 
nocturnal enuretic patients (16 boys and 14 
girls) with a mean age of 11.83 years (range 8 
to 18) were studied. The mean number of bed 
 wetting in patients’ group was 15.96 with SD 
±2.33 and ranged from 12–28 bed wetting 
nights per month. Urodynamic studies, 
including filling cystometry, a postvoid 
residual (PVR) volume of urine, 
uroflowmetry, all patients’ had prior failed 
desmopressin therapy.

RESULTS:

The filling cystometry of 30 RMNE was 
normal in 13 patients (43.3%) and abnormal in 
17 patients (56.6%) in the form of {detrusor 
overactivity (DO) in 12 patients (40%) and 
low bladder compliance in 5 patients 
(16.6%)}, with p-value (>0.05).

DISCUSSION:

Based on the results of our study, a routine 
UDS should not be recommended prior to a 
combination treatment; the combination 
therapy of anticholinergics with desmopressin 
could be applied as a first-line treatment for 
patients with RMNE. Similar to our study, 
Sehgal et al, (2007), recommended that the 
monosymptomatic primary enuretics with 
normal voiding chart may be started on 
behavioral therapy without subjecting them to 
urodynamic test. Even in polysymptomatic 
enuretics, drug therapy may be started 
empirically. Urodynamic testing may be 
reserved for polysymptomatic enuretics who 
show abnormal ultrasound or who fail to 
respond to first line treatment. While Yucel et 
al, (2004), reported that the primary nocturnal 
enuresis (PNE) and NE persisting into 
adolescence may be associated with abnormal 
urodynamic findings. Patients may benefit 
from urodynamic studies, because if the 
findings are abnormal, they might have the 
best chance of successful treatment. Also, Ryu 
et al, (2013), reported that the urodynamic 
findings were helpful for selecting further 
treatment strategies for children with RMNE, 
although in the same study, it was recommend 
that the urodynamic studies of children with 
NMNE should not be performed as a routine 
diagnostic procedure.
CONCLUSIONS:

The urodynamic studies in patients with refractory MNE should not be performed as a routine diagnostic procedure. Also it is recommended that a combination therapy of anticholinergics with desmopressin could be applied for patients with refractory monosymptomatic nocturnal enuresis. A UDS could then be performed in patients who do not respond to the combination treatment.

REFERENCES:


