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THE ROLE OF URODYNAMIC STUDY IN NOCTURNAL ENURESIS: URODYNAMIC FINDINGS AND TREATMENT OUTCOME CORRELATION IN CHILDREN WITH PHARMACOTHERAPY RESISTANT MONOSYMPTOMATIC NOCTURNAL ENURESIS OR SEVERE NON-MONOSYMPTOMATIC NOCTURNAL ENURESIS

Hypothesis / aims of study
This study aimed to determine whether or not a urodynamic study (UDS) is beneficial for patient management of pediatric nocturnal enuresis (NE), especially in pharmacoresistant monosymptomatic nocturnal enuresis (PRMNE) or severe non-monosymptomatic nocturnal enuresis (NMNE) patients.

Study design, materials and methods
Children with PRMNE or severe NMNE who underwent a UDS for the process of NE treatment were retrospectively reviewed. The UDS findings of patients and treatment outcomes of subsequent tailored therapies according to the UDS findings were analyzed.

Results
A total of 80 children, 19 of which were diagnosed with PRMNE and 61 of which were diagnosed with NMNE, were included in the final analysis. Of the 19 PRMNE children, 12 (63.2%) demonstrated abnormal UDS findings. Ten demonstrated detrusor overactivity (DO) with or without decreased cystometric bladder capacity (CBC); the treatment outcomes markedly improved in all of the children after anticholinergics were added to the initial desmopressin therapy. Biofeedback was found to be helpful for two children with detrusor-sphincter dyssynergia. All of the total 61 children with NMNE demonstrated abnormal urodynamic findings of DO with or without decreased CBC, and 42 (68.9%) achieved more than partial response (>50% decrease in the number of wet nights) when given a combination therapy of anticholinergics and desmopressin.

Interpretation of results
The urodynamic findings were helpful for selecting further treatment strategies for children with PRMNE. The results indicate that combination therapy of anticholinergics and desmopressin improved treatment success in children with DO, biofeedback may be a valid option for bedwetters with DSD, and enuresis alarm may also serve as a suitable alternative treatment when there are no abnormal findings from a UDS. All of the children with NMNE were diagnosed in a UDS with DO or DO with decreased CBC, and 68.9% of these patients achieved more than a PR when given an initial combination therapy of anticholinergics with desmopressin; thus, a routine UDS should not be recommended prior to a first-line combination treatment in children with NMNE.

Concluding message
The urodynamic findings were helpful for guiding children with PRMNE in the proper choice of further treatment strategies. However, based on the results of this study, a routine UDS should not be recommended prior to a first-line combination treatment in children with NMNE.

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