

URODYNAMIC EVALUATION OF THE CHILDREN WITH ENURESIS NOCTURNE ACCOMPANIED BY DAYTIME URGE INCONTINENCE OR DAYTIME VOIDING POSTPONEMENT.

Hypothesis / aims of study

We used urodynamic study to evaluate children with enuresis nocturna accompanied by daytime neurotic urgency incontinence (UI) or voiding postponement (VP) children.

Study design, materials and methods

A total of 64 children who had the daytime incontinent and were evaluated by urodynamic study from June 2007 to October 2009 were included in the study. The children from 5 to 13 years old, the mean age was (10.67 ± 3.70) years. The children were divided into two groups according to symptom: UI and VP. Of them 39 children were found to have UI, mean age was $10(10.28 \pm 3.86)$ years old and 25 children with VP, mean age was 11 (11.32 ± 3.44) years old. Detailed history collection including micturition frequency, voided volume, leakage, fecal retention and the family history of enuresis.

Results

The urodynamic characteristics of two groups are shown in Table 1 and 2.

Table 1 The flowmetry and bladder ultrasound in VP and UI children with enuresis

	% clinical performance		Totals	P value
	VP	UI		
Urinary flow curve :				
Bell-shaped curve	48% (12/25)	64%(25/39)	58%(37/64)	
Case curve	52% (13/25)	36%(14/39)	42%(27/64)	
Staccato	28%(7/25)	18%(7/39)	22%(14/64)	
Platform curve	4%(1/25)	8%(3/39)	6%(4/64)	
Intermittent curve	20%(5/25)	10%(4/39)	14%(9/64)	
Urinary tract infection	16%(4/25)	21%(8/39)	19%(12/64)	
Increase in residual urine volume	60%(15/25)	41%(16/39)	48%(31/64)	
Bladder wall thickness	28%(7/25)	5%(2/39)	17%(9/64)	$P < 0.05$
Detrusor overactivity	48%(12/25)	67%(26/39)	59%(38/64)	

Table 2 Urodynamic study of two groups

	Mean±SD		P value (ANOVA)
	VP	UI	
Bladder capacity (ml)	188.62±145.73	235.02±150.531	$P=0.246$
Maximum bladder capacity (ml)	359.28±245.57	301.82±136.26	$P=0.294$
The maximum flow rate (ml/s)	20.20±9.02	14.09±11.56	$P=0.028$
Compliance (ml/cmH ₂ O)	40.34±35.86	36.61±23.27	$P=0.291$
Maximum detrusor pressure (cmH ₂ O)	66.81±38.03	78.17±46.40	$P=0.33$
Maximum urethral pressure (cmH ₂ O)	152.29±47.53	107.71±40.34	$P=0.003^*$

Interpretation of results

Between the two group , children had pathological uroflow curves with VP vs UI was(52%vs36%); More children with UI had urinary tract infection than those with UI (16%vs21%); Residual urine volume increased VP vs UI was(60%vs41%); Bladder wall thicken VP vs UI was(20%vs5%, $p < 0.05$); significantly more children with VP had symptoms($p < 0.05$). The maximum flow rate, children with VP were higher than those with UI (20.20 ± 9.02 vs 14.09 ± 11.56 , $p < 0.05$). Maximum urethral pressure between VP and UI was significantly different (152.29 ± 47.53 vs 107.71 ± 40.34 , $P=0.003 < 0.05$).

Concluding message

The symptoms and urodynamic dysfunction of the children with enuresis nocturna accompanied by VPI are more severe than those of the UI patients. The therapeutic plan should be made according to the urodynamic evaluations of these patients.

Disclosures

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