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ULTRASOUND BLADDER MEASUREMENTS AND URODYNAMIC CORRELATION IN CHILDREN WITH PRIMARY NOCTURNAL ENURESIS

Ultrasound bladder measurements and Urodynamic correlation in children with Primary Nocturnal Enuresis

Purpose: We investigated the correlations between ultrasonographic bladder wall thickness and urodynamic (UDS) findings, and estimated the diagnostic value of bladder wall thickness for prediction of treatment in children with primary nocturnal enuresis (PNE).

Materials and Methods: Ultrasound measurements (US) and UDS were performed on a total of 100 consecutive children 6-14 years old (mean age 9.1±2.2) with PNE. The US Protocol was specially designed for the evaluation of bladder wall thickness (BWTh), at the 50% of bladder capacity of the expected bladder volume for the child's age. All children underwent UDS for detailed assessment of any underlying detrusor overactivity. The children were divided in 4 groups depending on PNE severity [1st group with mild PNE (0-3 times a week) included 25 children, 2nd group with moderated PNE (3-6 times a week) included 30 children, 3rd group with severe PNE (every night) included 20 children and 4th group included 25 children with PNE and diurnal symptoms]. The US bladder parameters were then correlated with the UDS findings.

Results: The mean BWTh was 1.28±0.17mm in the first group, 1.7±0.52mm in the second group, 1.96±0.41mm in the third group and 2.36±0.41mm in the fourth group. DO occurred in 3/25 children (12%) in the first group, in 8/30 (26%) in the second group, in 12/20 children (60%) in the third group and in 17/25 children (68%) in the fourth group. Comparing the BWTh in the four groups with the UDS findings, it was found that BWTh was significantly correlated with DO where the maximum amplitude of DO occurred in 20 children who had PNE with diurnal symptoms.

Conclusions: US assessment of bladder wall thickness could be used as a sensitive screening tool for the diagnosis of DO in children with PNE, therefore avoiding UDS in some children.

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Is this a Randomised Controlled Trial (RCT)?	**No**
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Was this study approved by an ethics committee?	**Yes**
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Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**