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Evaluation of lower urinary system symptoms and neurogenic bladder in children with cerebral palsy: relationships with the severity of cerebral palsy and mental status

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**Abstract:** Aim: This study aimed to evaluate lower urinary system symptoms, to determine bladder type in children with cerebral palsy (CP), and to determine the relationship between bladder type, and the severity of CP and mental status of the children. Materials and Methods: The study included 41 children with CP. Subjects were first asked to provide information concerning lower urinary system symptoms. Urodynamic examination was performed in 41 children with CP. The severity of CP was determined according to the Gross Motor Functional Classification System (GMFCS). The Stanford-Binet Intelligence Scale was used to determine intelligence quotients (IQ). After urodynamic examination, subjects were divided into 2 groups based on bladder type: neurogenic detrusor overactivity (NDO) and normal bladder (NB) groups. Results: One or more lower urinary system symptoms were observed in 78% of the subjects. NDO was observed in 30 subjects (73.2%), while NB was observed in 11 (26.8%), based on urodynamic study. While there was an almost statistically significant difference in terms of IQ scores ( $P = 0.053$ ) between the NDO and NB groups, there was not a statistical difference in terms of GMFCS distribution. Conclusion: The incidences of urinary system symptoms and neurogenic bladder are high in the CP population. Multiple factors, such as the effects on IQ, bladder functions, and mobility caused by cerebral lesions, may cause urinary dysfunction.

**Key Words:** Cerebral palsy, lower urinary system symptoms, neurogenic bladder, mental status, disability

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