


Frequency of urinary symptoms in schoolchildren from Curuçá, Pará

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ABSTRACT

Lower urinary tract dysfunction is a non-neurogenic alteration of Bladder and Bowel Dysfunction defined as an abnormal voiding pattern for the child's age, including the loss of coordinated capacity for urine storage, storage, and elimination. These urination problems can directly influence the child's quality of life by affecting their mental health. The proposed project is a cross-sectional study. The research was carried out in kindergarten schools located within the Municipality of Curuçá, Pará, with prior authorization from their legal guardian. The choice of these schools is justified by the need to access the greatest evidence of cases of dysfunctions in the children's urinary tract.

Keywords: Voiding dysfunction, Children, Lower urinary tract.

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INTRODUCTION

Lower urinary tract dysfunction (LUTD) occurs when there are disturbances at any stage of urination that would be filling or emptying of the bladder, without the presence of neurological or pathological obstructive urinary tract disease. If the disorder is in the storage phase of the bladder, there will be changes in urinary frequency, incontinence, urgency and nocturia. If in the bladder emptying phase, there will be hesitation, straining, weak or intermittent jetting and dysuria, or even other symptoms (restraint maneuvers, sensation of incomplete emptying, urinary retention, post-void drip, and urinary stream under pressure) (Austin *et al.*, 2016). LUTD is a non-neurogenic alteration of Bladder and Bowel Dysfunction (IBD), which has been standardized by the International Society of Infant Continence (ICCS) relating the presence of concomitant urinary and intestinal tract symptoms (Austin *et al.*, 2016).

The proportion of children in the population who have symptoms of LUTD ranges from 2% to 25% (Latorre *et al.*, 2018). Several problems, such as isolation from society due to shame, psychological alterations, low self-esteem and relational difficulties in the family and school environment, negatively influence the quality of life of patients (Vasconcelos *et al.*, 2013; Burgers *et al.*, 2013).

For many children and adolescents, the presence of functional voiding dysfunction leads to changes in routine, which may lead to maltreatment within the family, learning difficulties and punishments at school, affecting quality of life (Veloso *et al.*, 2016). It can trigger a negative psychological charge in the child, causing them to experience feelings of humiliation, fear of being discovered, a feeling of immaturity or fear of sleeping away from home, which ends up leading to a drop in self-esteem (Souza *et al.*, 2015).

Although it is common in children and underdiagnosed in clinical practice, it presents physiological risks, emotional and social constraints, bringing possible problems to deal with such problems, in many cases parents or guardians do not know the signs and symptoms that the child presents (Vasconcelos *et al.*, 2013). Considering the need for early recognition of urinary symptoms in children and that no study has yet been conducted in the Municipality of Curuçá involving this topic, this research aims to verify the frequency of voiding dysfunction in children in public schools in the Municipality of Curuçá, Pará.

MATERIAL AND METHODS

The research was carried out in an Early Childhood Education school located in the municipality of Curuçá, Pará, with prior authorization from its legal guardian. The choice of school is justified by the need to access the greatest evidence of cases of dysfunctions in the children's urinary tract. The period in which data collection took place was from April 2023 to May 2023. The study

population consisted of children between 9 and 13 years old, from 5th to 7th grade, enrolled in public schools in the municipality of Curuçá.

The inclusion criteria adopted by this research were: Parents of children aged between nine and thirteen years, of both sexes. Parents of children with neurological voiding dysfunctions were excluded.

This is a study with non-probabilistic sampling, since it may happen that an element of the studied population does not become part of the sample. The *Dysfunctional voiding scoring system* (DVSS) was used, which is a valid questionnaire to quantify the severity of abnormal urination behaviors, as it allows the identification of children with voiding symptoms and the monitoring of responses to various types of treatments. The original version of the DVSS consists of ten items to assess the presence of lower urinary tract dysfunction, with responses according to the Likert scale being assigned scores from 0 to 3 according to the existence of the symptom (Never or almost never = 0; less than half the time = 1; almost all the time = 2; almost all the time = 3). The result of the test is the sum of the values assigned to the items (minimum = 0; maximum = 30). Since the score indicating the possibility of lower urinary tract dysfunction was greater than 6 points for girls and greater than 9 for boys (Rizzini *et al.*, 2009).

The data collection procedure took place according to the steps described below:

- a) On the day of the parent-teacher meeting, called by the school board, they were invited to participate in the research, for which they were given the informed consent form. Those who signed answered the DVSS questionnaire in order to be able to evaluate the children for possible symptoms.
- b) The questionnaires were collected together with the informed consent form, in order to identify children who had signs of voiding dysfunction.

The collected data were stored in Microsoft Excel® spreadsheets, which were also used to make the graphs. Statistical analysis was performed using the Biostat 4.0® statistical package, where the statistical tests that best fit the study proposal were used.

RESULTS AND DISCUSSION

In the present study, it was possible to observe the occurrence of children with urinary tract dysfunctions in schoolchildren from the municipal network of Curuçá-PA, we obtained the participation of 29 parents/guardians of children of both sexes aged between 9 and 13 years, data collection was carried out on the parents' self-perception in an interview applied through the DVSS questionnaire. It was possible to verify that about 20% of the parents interviewed claim to identify some type of urinary dysfunction or constipation in their child, based on this reality the answers that obtained a higher percentage in the data collected were, "Does it happen that your child does not poop every day? How often?" 24.14% of the interviewees answered that more or less half of the time



their child already had episodes that we can consider as constipation. The following answers that also drew attention with a high percentage, does it happen that your child only goes to the bathroom to pee once or twice a day? How often does this problem of urinating a few times a day occur to your child? About 17.24% answered that their child was about half the time. The next question with the high percentage of response that we can characterize as LUTS was, Has your child been wetting his clothes with pee during the day? When your child gets wet with pee, do the underwear/panties get soaked? and 10.34% of the interviewees answered that it was more or less half the time, which allowed us to identify a urinary tract dysfunction. Basically, we totaled a possible LUTD in 20% of the children who participated in the study through the negative answers, according to the parents interviewed. These results are relevant because urinary tract dysfunctions can cause pain, discomfort and affect children's quality of life. However, it is important to highlight that the research had some limitations, such as the fact that it was conducted in only one public school and with a limited number of participants. In addition, data collection was based on the parents' self-perception, which may have influenced the results and made the responses subjective. Therefore, it is suggested that more comprehensive studies with a larger sample of participants be conducted in order to confirm these results and identify possible risk factors for urinary tract dysfunction in children. In addition, it is important that health professionals, guardians and educators are aware of these problems and offer alternatives for the reception and adequate treatment of children with such dysfunction and thus return health and well-being to them.

Table 01 - Results of the Dysfunctional Voiding Scoring System (DVSS) questionnaire

QUESTIONS/ANSWERS	ABOUT HALF THE TIME	LESS THAN HALF TIME	NEVER OR ALMOST NEVER	Grand Total			
YOUR CHILD HAS WET FROM PEEING ON CLOTHES DURING THE DAY?	10,34%	6,90%	82,76%	100,00%			
WHEN YOUR CHILD WETS HIMSELF OR HERSELF WITH PEE, THE CUECA/PANTIES STAYS ENFALLA?	10,34%	13,79%	75,86%	100,00%			
	ABOUT HALF THE TIME	NEVER OR ALMOST NEVER	ALMOST ALL THE TIME	Grand Total			
YOUR CHILD HOLDS HIS OR HER PEE BY CROSSING HIS LEGS, SQUATTING, OR DANCING?	6,90%	89,66%	3,45%	100,00%			
	ABOUT HALF THE TIME	LESS THAN HALF THE TIME	NEVER OR ALMOST NEVER	ALMOST ALL THE TIME	Grand Total		
IT HAPPENS FROM YOUR CHILD DOESN'T POOP EVERY DAY? HOW OFTEN?	24,14%	13,79%	55,17%	6,90%	100,00%		
	ABOUT HALF THE TIME	LESS THAN HALF THE TIME	Didn't Respond	NEVER OR ALMOST NEVER	ALMOST ALL THE TIME	Grand Total	
DOES YOUR CHILD HAVE TO STRAIN TO POOP?	6,90%	3,45%	3,45%	79,31%	6,90%	100,00%	



	ABOUT HALF THE TIME	LESS THAN HALF THE TIME	Didn't Respond	NEVER OR ALMOST NEVER	ALMOST ALL THE TIME	Grand Total	
IT HAPPENS FROM YOUR CHILD/CHILD ONLY GO TO THE TOILET PEE ONCE OR TWICE A DAY? HOW OFTEN DOES THIS URINATION PROBLEM ONLY A FEW TIMES A DAY DOES IT HAPPEN TO YOUR CHILD?	17,24%	10,34%	3,45%	48,28%	20,69%	100,00%	
	ABOUT HALF THE TIME	ABOUT HALF THE TIME	LESS THAN HALF THE TIME	Didn't Respond	NEVER OR ALMOST NEVER	ALMOST ALL OF TIME	Grand Total
WHEN YOUR CHILD NEED TO PEE, NO CAN YOU WAIT, DO YOU HAVE TO GO TO THE BATHROOM FAST?	6,90%	3,45%	6,90%	6,90%	72,41%	3,45%	100,00%
	ABOUT HALF THE TIME	LESS THAN HALF THE TIME	Didn't respond	NEVER OR ALMOST NEVER	Grand Total		
DOES YOUR CHILD HAVE TO STRAIN TO PEE?	3,45%	3,45%	13,79%	79,31%	100,00%		
	ABOUT HALF THE TIME	LESS THAN HALF THE TIME	Didn't Respond	NEVER OR ALMOST NEVER	ALMOST ALL OF TIME	Grand Total	
IN THE LAST 30 DAYS, WHEN YOUR CHILD PEED, DID IT HURT?	3,45%	3,45%	13,79%	75,86%	3,45%	100,00%	

CONCLUSION

The present study points to the importance of investigating recurrent cases of LUTD in children in kindergarten reported by parents and guardians throughout the research. With the survey of data from the population studied, it brings the perception for a more attentive and holistic care of those responsible and educators for early symptoms. Considering the related aspects that can become harmful, such as: emotional and social constraints, in what encompasses the relationship networks in the family and school environment, and that these elements can also harm both self-esteem and school performance, causing an even more negative impact on quality of life. It is worth emphasizing the importance of health education planning for LUTD, for parents and education professionals.



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