
Extraordinary Daytime Urinary Frequency in Children

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Background. Sudden onset of daytime urinary frequency of a small amount of urine in a previously toilet-trained child can be a disturbing problem. Psychosocial problems, problems at school, or problems within the family have to be taken into consideration.

Methods. Fifteen children with sudden onset of isolated daytime urinary frequency were evaluated and followed for a period of 12 to 18 months. A thorough medical and family history was obtained for each child, with special attention given to any psychosocial problems the child had experienced. All the children underwent a physical examination, complete urinalysis, and ultrasonography of the kidneys and bladder.

Results. In all of the patients, the urinalysis and ultrasonographic findings were within normal limits. A trigger factor was identified as the cause of urinary frequency in each case.

Conclusions. Because urinary frequency is usually a benign self-limited condition, an extensive urological evaluation is not indicated. In most cases, providing reassurance to the parents and the child is the only intervention necessary.

Key words. Urination disorders; stress; child; child reactive disorders; counseling. (*J Fam Pract* 1993; 37:28-29)

The sudden onset of daytime urinary frequency in a previously toilet-trained child can be disturbing to parents and the physician. Frequent daytime excretion of small amounts of urine, as often as every 5 to 20 minutes, is the classic clinical manifestation.¹⁻³ In benign urinary frequency, no clinical or laboratory evidence of lower urinary tract infection or other physical cause is found. The syndrome usually occurs in children of preschool or kindergarten age and has a self-limited course.

In this report, we describe a group of 15 children who experienced extreme daytime urinary frequency. The children were patients at our community pediatric clinic, which cares for approximately 10,000 children.

Methods

Over a period of 33 months, from January 1990 to September 1992, 15 children with isolated extraordinary

urinary frequency were followed clinically. Only patients without a history of urinary tract infection were included in the study.

During the initial visit for the complaint, a thorough medical and family history was obtained. Special attention was given to any psychosocial problems or problems at school or within the family. Each child was given a complete physical examination. A urinalysis, including a dipstick test to determine glucose and protein levels, examination of sediment, and measurements of urine osmolality and specific gravity, as well as urine culture were ordered. Ultrasonography of the kidneys and bladder was also performed on each of the patients.

Results

Of the 15 children with sudden onset of isolated daytime urinary frequency and urgency, 9 were boys and 6 were girls (Table). The mean age at onset of symptoms in the boys was 5.2 years (range of 4 to 10 years) and in girls, 6 years (range of 4 to 8 years).

Secondary enuresis nocturna was present in 2 chil-

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Clinical Characteristics of 15 Children with Daytime Urinary Frequency

Age (y)	Sex	Kindergarten or School-Related Stress	Parent Had an Operation	Death in the Family	New Home	Symptom Duration* (mo)
5.3	M			+		2
4	M		+			4
6.4	F	+				1.5
6	F	+				3.5
4.6	F		+			3
4.8	M	+				4
4	M				+	2.5
6.8	F	+				3
4	M			+		2
10	M	+				4
4	F	+				3
6.7	M		+			2.5
4.4	M				+	5
4.2	M	+				4
8	F	+				3.5

*At the time of this publication, all 15 children had been symptom-free for at least 1 year.

dren (a 6.7-year-old boy and an 8-year-old girl). All of the children had been toilet trained. None of the children had polydipsia or polyuria. In all of the children, bowel habits had remained normal.

The initial patient symptoms were urinary frequency and urgency, resulting in excretion of only a small volume of urine. There was no evidence of urinary tract infection as documented by normal findings on urinalysis and a negative urine culture. Metabolic disease was excluded in all of the patients. In all children, normal kidneys and bladder were documented by ultrasonographic examination.

In each case, however, the parents were able to identify an emotional or psychological trigger occurring just before the onset of symptoms. School-related stress problems were noted in eight children, severe illness of a family member in five children, and moving into a new home in two children. All of the children improved after counseling or resolution of the social problem. Duration of symptoms ranged from 6 weeks to 5 months.

Discussion

Frequent urination must be differentiated from polyuria related to diabetes mellitus, diabetes insipidus, and other metabolic diseases.¹⁻³ Lower urinary tract infections have to be excluded, including adenovirus and cytomegalovirus infection.³ Normal urinary concentration (specific gravity of <1.020 or osmolality >870 kg) should be confirmed.⁴

During the study period, 16 other children (10 girls and 6 boys) were evaluated in our clinic and found to have urinary tract infections. In our experience, benign urinary frequency is as common as urinary tract infections in children.

The cause of daytime urinary frequency is not known, but a psychogenic origin has been suggested.^{1-3,5} In our group, a school, family, or home problem was identified in the life of each child. Bass⁵ reported 13 cases of pollakiuria; stress factors were identified in 9 of the children. Providing reassurance to the parents and child regarding the self-limited, benign nature of the condition was helpful. Walker and Rickwood³ reported that treatment with detrusor antispasmodics (propantheline, oxybutynin) was not helpful. In all 15 of the children in our study, symptoms resolved within 6 weeks to 5 months, and all patients remained symptom-free during the subsequent 12- to 18-month follow-up period. In view of the benign nature of this condition, no extensive invasive urologic investigation was needed. A trigger factor was identified in each case.

In conclusion, because of the benign nature of this condition, no ultrasound or invasive urologic evaluation is needed if the initial urinalysis and physical examination are within normal limits. Reassurance of the parents and the child is the only intervention necessary, and should begin as soon as possible after diagnosing the problem.

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