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Urology

Center Provides Relief for Children with Incontinence



Andy Combs, Agnes Bayer and Kenneth Glassberg in the pediatric uroynamics lab.

If little Michael is nervous about the recording equipment used to document his visit to the pediatric urodynamics lab, he doesn't show it. With electrodes that measure muscle activity taped to his skin, Michael, 10, hops off the exam table and walks into the lab's private bathroom to urinate. As he does so, blips from the electrode representing the activity of his pelvic floor muscles appear on a sophisticated computer monitor in the next room.

Michael has come to the urodynamics lab because he has wetting accidents both day and

night. He sometimes feels such a strong and sudden urge to urinate that he can't get to a bathroom fast enough.

While Michael is in the private bathroom, Kenneth Glassberg, M.D., professor of urology and director of pediatric urology, Andy Combs, RPA-C, and Agnes Bayer, CPNP observe the graphs on the computer that Michael's activity is generating. The information gives them the critical data needed to understand the causes behind the child's incontinence. "Pelvic floor muscles must relax to let urine flow out of the bladder," Dr. Glassberg says. "Normally there is a 2-second delay between muscle relaxation and the beginning of urine flow, but in this case, the flow starts instantaneously but continues intermittently. The stop and go flow pattern indicates Michael has a problem known as dysfunctional voiding."

Years of dysfunctional voiding have led to an overactive bladder, where the bladder contracts suddenly and involuntarily. Like most children who wet themselves during the day, Michael has no underlying structural or neurological defect.

Incontinence is common in young children, affecting about 15 percent of 5-year-olds. Many are left untreated, however, because treatment can be time-consuming and is often frustrating for the clinician as well. Parents of these children often come to the urodynamics lab frustrated by previous therapies that did not work or assurances that the child would eventually grow out of the problem.

"That may be true for some children, but it may take years," Dr. Glassberg says. "In the meantime, the child has to deal with the consequences. Their pants are wet all day,

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they smell of urine, are taunted by other children, and develop low self-esteem. Untreated incontinence may also permanently damage the bladder and even the kidneys. If nothing else, it can lead to lifelong problems with frequency and urgency."

Unique Care and Treatment

Columbia's state-of-the-art urodynamics and biofeedback center, housed in the Morgan Stanley Children's Hospital, was established to treat children with incontinence as well as all other conditions that affect bladder function, such as spina bifida and cerebral palsy. In the two years since the center was opened by Ms. Bayer, the center's clinicians have treated more than 1,700 patients. Demand is still rising and the division of pediatric urology is getting ready to open its second lab later this year. Mr. Combs, an internationally recognized expert in urodynamics with over 25 years of experience, joined the urodynamics lab in January as its director.

"There are not a lot of places where children with incontinence can go for comprehensive testing and treatment," Mr. Combs says. "Over the years you develop a greater appreciation for the devastating effect it has on them and their families. We take pride in being one of the few places in the New York area that offers the full range of urodynamic testing to identify the problem and find a solution."

Many parents and even some pediatricians are surprised to hear that the root of the problem is physical and not psychological. And identifying the physical source takes time, since children with nearly identical symptoms may have different underlying disorders, each with its own therapeutic requirements.

The most common problem is a tendency to squeeze pelvic floor muscles during urination instead of relaxing them. "Some of these kids are playing tug of war with their bladder and pelvic floor muscles," Ms. Bayer says. The result is a bladder that doesn't empty completely, an increase in bladder pressure, and then, another urgent trip to the bathroom.

Ms. Bayer and Mr. Combs teach children how to control and coordinate their muscles during urination. Computer-ized biofeedback games help make such learning fun by allowing children to shoot baskets with their pelvic floor muscles. In as few as three hour-long sessions, the problem of uncoordinated voiding can be corrected.

"It is important to recognize that some of these 'wet' children have endured years living with a serious neurologic or anatomic abnormality," Dr. Glassberg says. "It is very satisfying to see children leave our center dry and with newly restored self-esteem."

—Susan Conova

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