Bladder And Bowel Dysfunctions In Children With Developmental Challenges

DR.G. NANDHINI
Paediatric Surgeon & Urologist
Bladder Bowel Dysfunction – constellation of Lower Urinary Tract Symptoms With Bowel Dysfunction

- Anatomical
- Functional

Bladder and bowel dysfunctions in children with developmental challenges

Dr. G. Nandhini, Paediatric Surgeon & Urologist
<table>
<thead>
<tr>
<th>Postponement Of Urination</th>
<th>Avoiding Closet</th>
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<tr>
<td>Urge Incontinence</td>
<td>Standing To Stool</td>
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<tr>
<td>Day / Night Wetting</td>
<td>Hard Stools</td>
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<tr>
<td>Frequency</td>
<td>Encopresis</td>
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<tr>
<td>Dysuria / Straining</td>
<td>Irregular Timings To Stool</td>
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<td>Hesitancy</td>
<td>Fissure In Ano</td>
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<tr>
<td>Holding Maneuvers</td>
<td>Poor / Picky Eaters</td>
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<td>Insignificant CFU In Urine</td>
<td>White Discharge</td>
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Chronic pelvic spasms
Normal bladder function

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Holding Maneuvers

Detrusor Sphincter Dyssynergia

Figure 6.1 Vincent’s curtsey
USG Abdomen - Bladder Wall Thickening
( > 3mm/5mm)
Figure 53.20 Non-laminar flow secondary to periodic tightening and relaxation of the external sphincter leads to eddy current and the ‘milk-back’ phenomenon, which can carry bacteria colonized at the urethral meatus up into the bladder and cause infection of the residual urine.
MCU – Micturiting Cysto Urethrogram
ENCOPERESIS – SPURIOUS DIARRHEA
VUR

URINE LEAK

Abdominal pressure during physical activity

Increased bladder pressure

Urine leakage

Stool in rectum

Bladder

Urethra
Wiping from back to front after a bowel movement may force germs into urethra.
Figure 1 – Overactivity of pelvic floor muscles following bladder and bowel dysfunction*
* Modified according to De Paepe et al. (16)
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IDENTIFY THE SPECIAL NEED

- urinary dribbling, frequency or infection
- poor anal tone or sensation
- ‘flat’ buttocks (sacral agenesis)
- sacral dimple, naevus or hairy patch
- absent reflexes in lower limbs
- meningomyelocele
- scoliosis or gait abnormalities
- spinal trauma

- Intact sensory and motor pathways to bowel and bladder
- An ability to recognize when wet or dry
- An ability to follow simple instructions
- An ability to make simple requests (may be by signing)
- Physically ability to sit on or get off a potty or toilet
- Or special aids may be necessary

Neuropathic bladder and bowel

Toilet Trainable
Cerebral Palsy / spinal trauma children

**Diagram:**
- C4 injury (tetraplegia)
- C6 injury (tetraplegia)
- T6 injury (paraplegia)
- Lumbar
- Sacral
- Coccygeal

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Meningomyelocele / spinal trauma
Neuropathic bladder & bowel

Palpable bladder & loaded colon
CIC: Clean intermittent catheterization

DOES NOT INCREASE INFECTIONS IF DONE CORRECTLY!!!!!!!
Clean Intermittent Catheterisation

Resealable plastic bags labeled "Clean" and "Dirty" placed in your child's backpack help him store his reusable catheters properly.
Assistance To Potty
Silicone foley catheter
Urine Leg Bag
Cognition disorders
OCCUPATIONAL THERAPY

Enables children and youth to complete meaningful tasks independently. We address:

- Fine Motor
- Hand Skills
- Writing
- Sensory Needs
- Autism
- Feeding
- Dressing
- Attention
- Coordination

BEHAVIOURAL THERAPY

ABA & IBI

Enables functional and socially acceptable behaviours. We address:

- Autism Spectrum Disorder
- Anxiety Disorders
- ADD
- Toileting Concerns
- Feeding
- Sleeping Issues
- Academic Challenges
- Communication
- Aggression etc.
UROTherapy is a standardized term referring to non-surgical and non-pharmacological treatment of LUT dysfunction.

**STANDARD UROTherapy**
- Information / DeMystification
- Behavioural Modification
- Lifestyle Advice
- Bladder Diary
- Regular Follow Up

**Specific Intervention UroTherapy**
- Biofeedback
- Neuromodulation
- Psychotherapy
- CBT-cognitive Behavioural Therapy
- Intermittent Catheterisation
Standard urotherapy (ICCS)

- Parental education
- Bladder training
- Regular follow up/support
- Bladder bowel charts
- Dietary modification
- Bowel training
BLADDER TRAINING:

• Timed voiding - every 2-3 hrs.
• Double / Triple voiding.
• Squatting / facing closet position for obese children.
• Complete emptying of urine by pelvic floor relaxation.
• Cleanse the external genitals after micturition.
• Male / female children – Local hygiene
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BOWEL TRAINING:

• Every morning stool- ½ to 1 hr of waking up.
• Appropriate positioning in closet.
• Do not use hand flush for stool cleaning.
• Ablution water always from front to back.
• Soap and water cleaning is a must.
• Institute laxatives and fiber supplements by doctor’s advice.
Children will be afraid of potty !!!
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• Drives the ablution in front – esp in girl children
• Trigger lower urinary tract symptoms
• White discharge / vulvo-vaginitis
• Insignificant colony count

Hand flush
DIET ADVICE:

• 2-3 liters of quantified water consumption/ day.

• Fruits twice daily

• Vegetables thrice daily.

• 50% of total consumption – fibre

• Avoid milk consumption of more than 3 glasses a day.

• Give a handful of nuts, raisins, figs & dates daily.

• Snacks – steamed sprouts.
Kid's Healthy Eating Plate

- Fruits
- Healthy Protein
- Whole Grains
- Vegetables

Stay active

Water

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Early recognition and treatment - to protect Growing Kidneys.

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Practice points – Team Management

- Overflow incontinence / constipation
- Clean intermittent catheterisation
- Night time drain
- Continuous bladder drainage
- Urobag / urine leg bag
- Dulcolax suppository
- Proctoclysis enema
- Timed / double voiding
- Potty training – morning stools
- Position training
- Behavioral therapy (incentives)
- Occupational therapy
- Dietary – high fibre diet
- Laxatives if required

Neuropathic bladder and bowel
Toilet Trainable
HAPPY LEARNING!!!

Ped Surg App
- Android playstore

- Paediatric Surgery & Urology Learning
- Patient Version / Doctor Version
- Chat Corner - To Reach Me

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