



The Role of the Urology Nurse in Managing Children with CKD

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So How did it all start?



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Renal Conditions

(1981 the link between bladder storage pressure and upper tract deterioration became clear)

Close to 45% of all kidney failure we see in children has been caused by problems with the bladder and urethra.”

Bernard Churchill

Urologist

The Hospital for Sick Children - 1987



How and Why?

In the late 1980's early 1990's things began to change.

- Increased work with children with frequent UTI's
- Development of the Haemodialysis unit
- Increasing number of Paediatric transplant work.

Primary Conditions of children referred to us were...

- Children with frequent UTI's
- Postural urethral valves
- Vesico-ureteric Reflux
- Reflux nephropathy
- Hinmians Syndrome non neuropathic, neuropathic bladder
- Prune Belly Syndrome
- Spina Bifida
- Sacral Agenesis

Bladder Assessment

Non invasive Urodynamics/Urotherapy

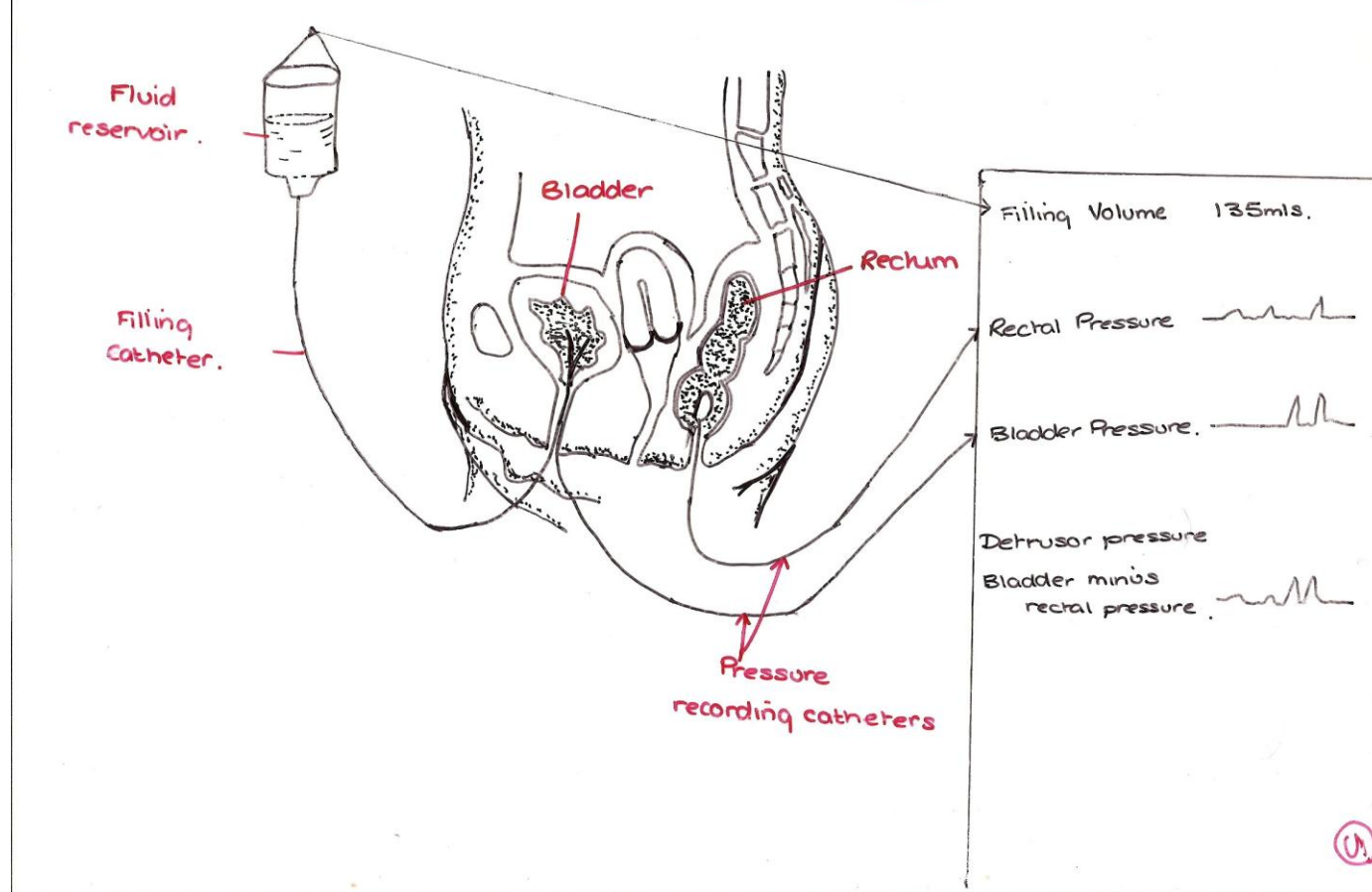
- 2-4 hour assessment of bladder function
- Detailed collection of information
- Pre-post void ultrasound scan (3 voids) +/-
- Urine flow

Urodynamics

(Bladder pressure studies)

- Measure pressure within the bladder while filling and voiding.
- Ideally combine with imaging of the bladder.
- Aims to give information about overall bladder function.

Bladder Pressure study.





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Questions we can answer

- Filling and voiding pressure
- Bladder capacity
- Detrusor pressure
- Sphincter weakness
- Overactive sphincter
- Reflux
- Bladder emptying
- Flow rate

What next?

- Intermittent Clean Catheterisation
- Indwelling Catheterisation (S.P)
- Mitrofanoff procedure
- Bladder augmentation
- Urinary diversion
- Vesicostomy

Clean Intermittent Catheterisation (CIC)

- Intermittent catheterisation is the temporary placement of a catheter to remove urine from the body.
- This is usually done by placing the catheter through the urethra to empty the bladder.

Advantages/Disadvantages

- Contenance
- Independence
- No Surgery
- No appliance
- - UTI
- + **Renal Function**
- Eliminate/reduce soreness/smell
- ? Reduce need for bladder augmentation
- Attitudes of parents/carers
- The teenage years - compliance
- Obesity/physical deformities
- UTI's
- Bleeding
- False passages
- Strictures
- May require surgery
- Drug therapy

Teaching, training, support

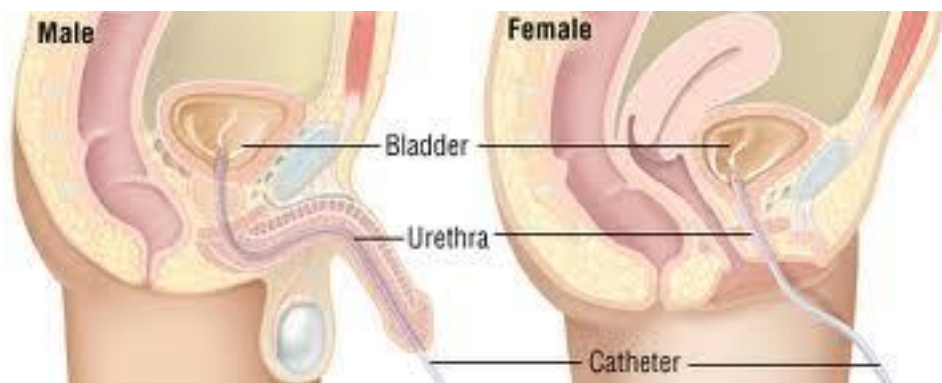
- Teaching CIC, child, parents or carers
- Support in schools
- Help and advice re products
- 3-6 monthly OPA
- Yearly/alternated year RUSS
- BPS as required
- Yearly update - check on catheter size, pads, bowel management, drug therapy
- Remember changes within the bladder can and will occur

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Indwelling catheterisation

- Fantastic way of making sure the bladder and kidneys are draining.
- Sometimes used to temporarily improve renal function.
- Used sometimes just for over-night use with Clean Intermittent Catheterisation in the day.
- Can be quite costly for the GP.

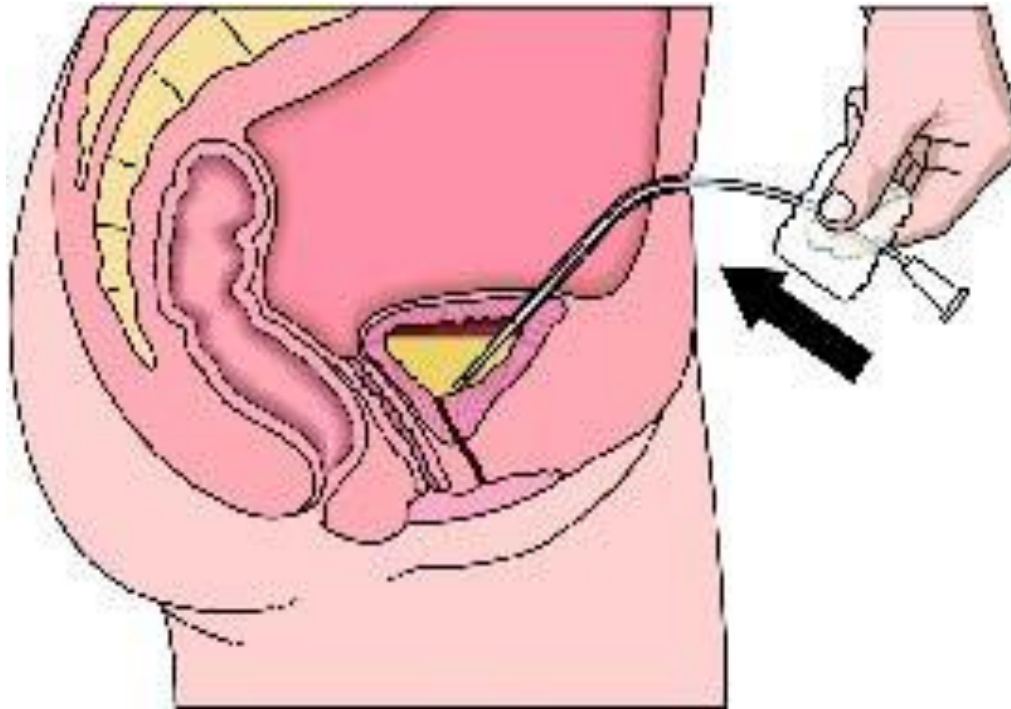




Mitrofanoff

- A mitrofanoff is a continent catheterisable stoma attached at one end to the bladder whilst the other end is brought to the skins surface

Mitrofanoff



Mitrofanoff



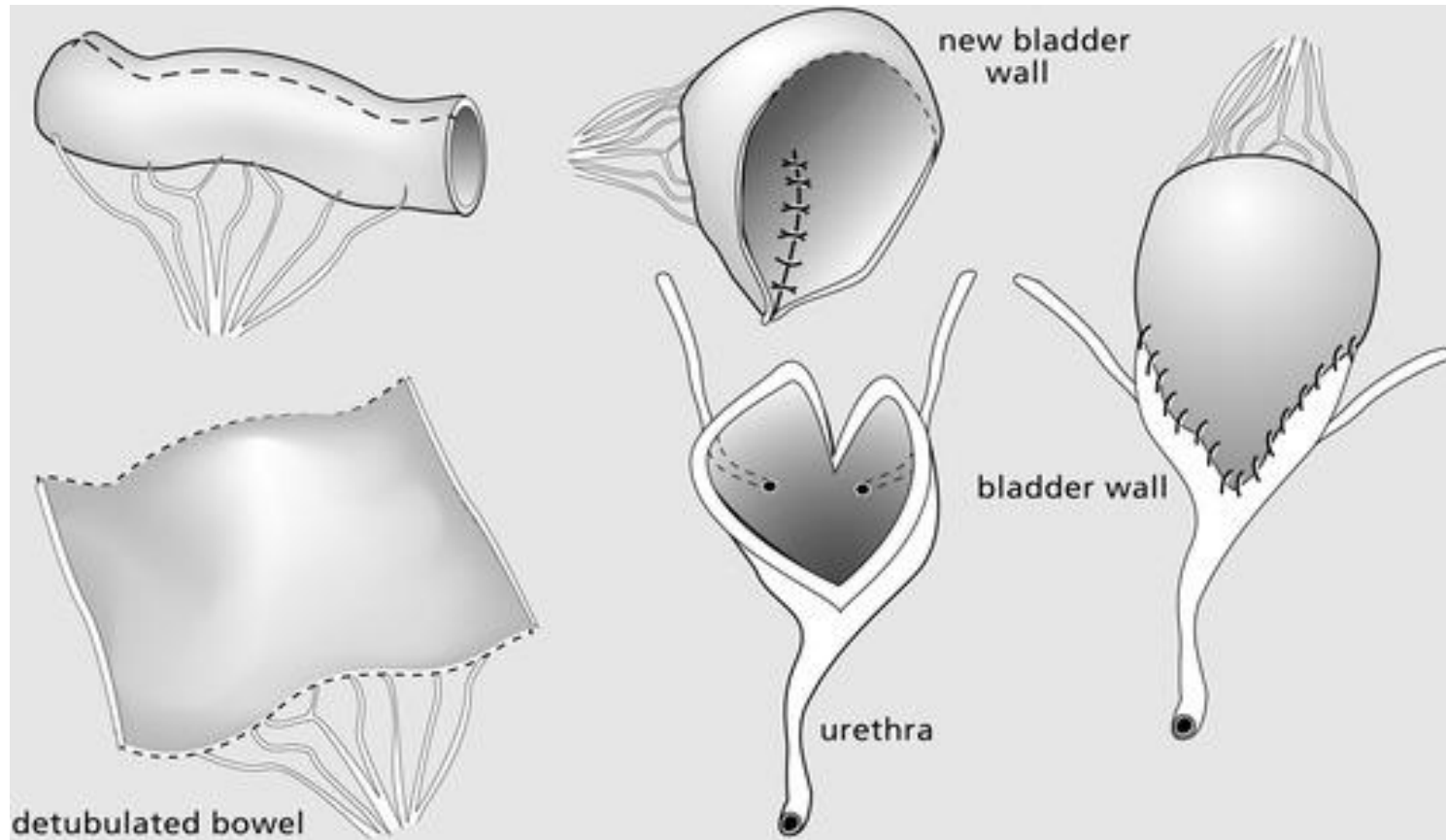
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Bladder Augmentation

- Segment of ileum/caecum or ureter is anastomosed on to the bladder to increase its capacity and reduce the overall bladder pressure.

Bladder Augmentation



Urinary Diversion



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Diversion/Urostomy

- A urostomy is a stoma that connects to the urinary tract and makes it possible for urine to drain out of the body.
- The stoma has no muscle, so it cannot control urine flow, causing a continuous flow. An external pouch collects urine flowing through the stoma.

Vesicostomy

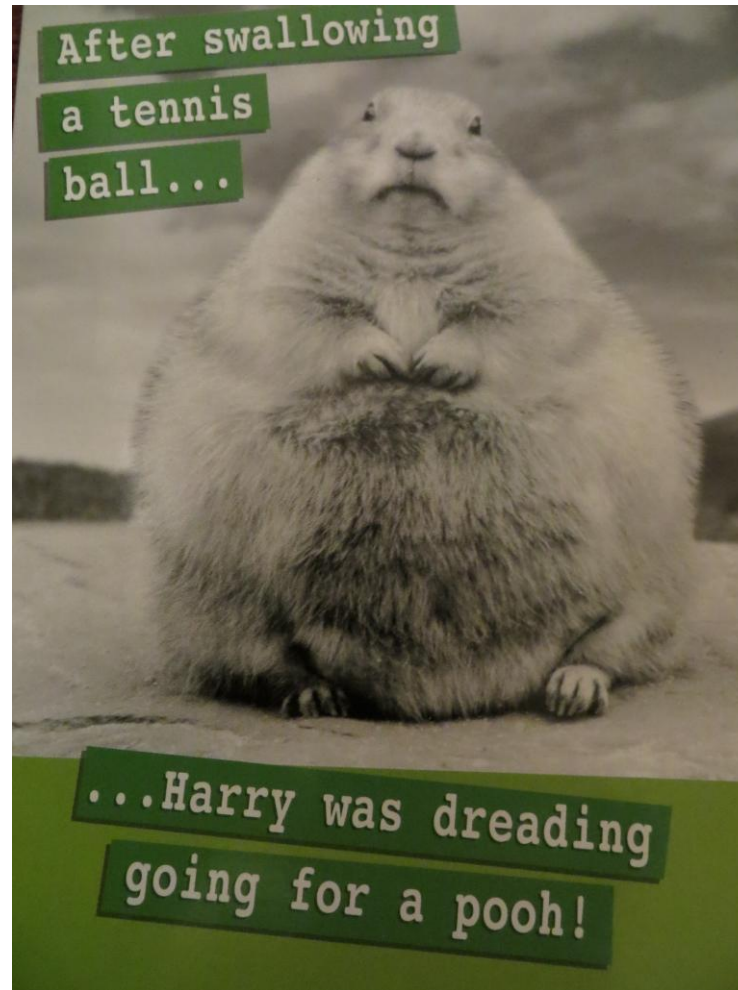


- Vesicostomy is an opening created in the lower abdomen (below the umbilicus) that allows urine to drain continuously from the bladder.

children who will need this procedure are infants who often have urethral valves, vesico-urethral reflux or spina bifida and other genito-rectal abnormalities.

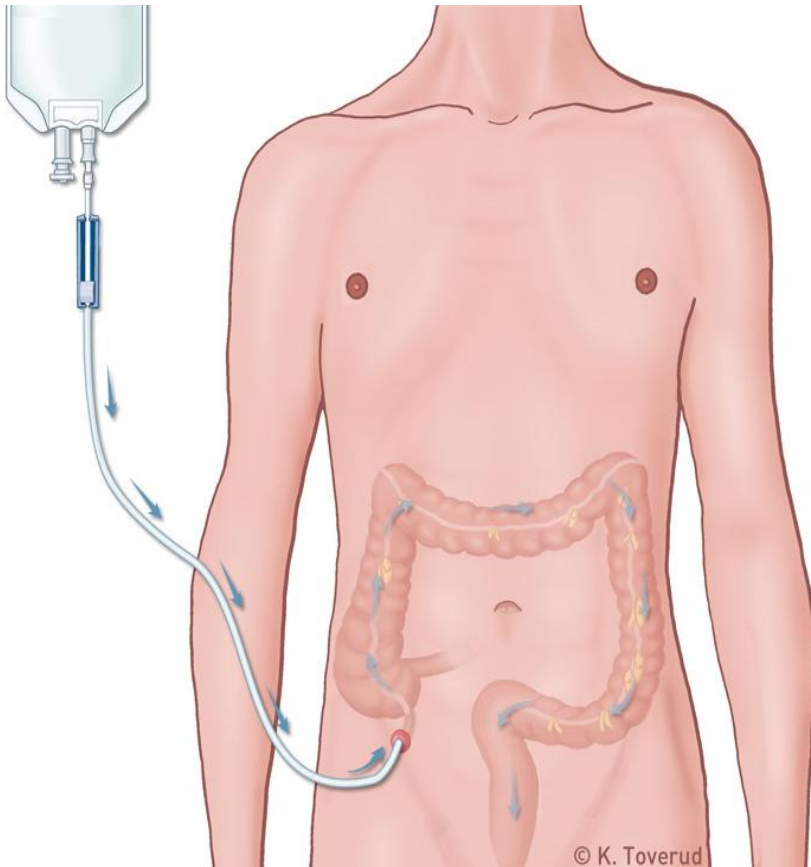
The main purpose of the procedure is to prevent urinary tract infections and prevent urine from going back into the kidneys and causing damage.

Bowels !!

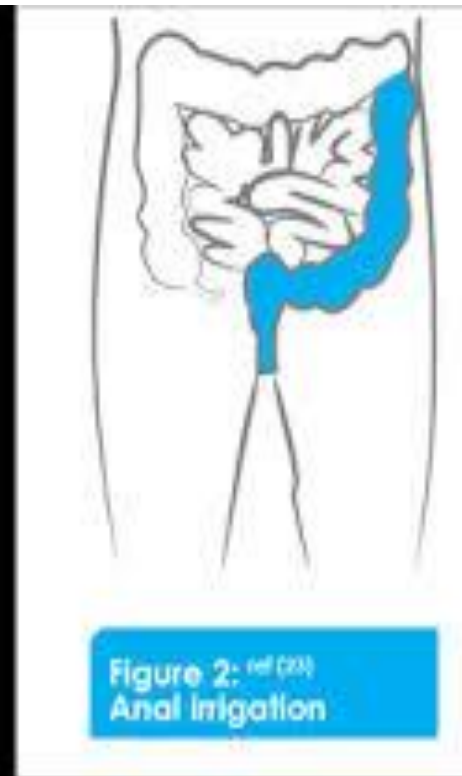


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Anti-grade Colonic Enema



Rectal Irrigation





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