

# ESPU Nurses Abstracts Book



## CONGRESS

17-20 APRIL  
2024



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# SN1: FUNCTIONAL VOIDING DISORDERS

Moderators: Ananda Nacif (QA), Sigrid Van de Borne (BE)

ESPU-Nurses Meeting on Thursday 18, April 2024, 09:20 - 10:20

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09:20 - 09:30

SN1-1 (OP)

## CHALLENGES IN E-HEALTH: THE EFFECT OF DIGITALIZATION OF FREQUENCY VOIDING CHARTS ON COMPLIANCE. RANDOMIZED CONTROLLED TRIAL COMPARING DIGITAL AND HARD COPY FREQUENCY VOIDING CHARTS.

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### PURPOSE

Frequency voiding charts (FVCs) are commonly used to gain better insight into the voiding and drinking behaviours of patients with voiding symptoms. Non-compliance when filling out a chart is known to be high. The use of a digital application might increase adherence, but little research has been conducted on this topic. The aim of this study is to compare the quality (number of correctly filled out charts) and quantity (number of complete charts) of digital versus paper FVCs among children and their parents.

### MATERIAL AND METHODS

A multi-centre parallel randomised controlled trial was conducted. Participants were assigned either a 48-hour digital FVC or a 48-hour paper FVC. Completion rates were scored based on a predefined scoring method and transcribed into a percentage. Secondary objectives included user friendliness, feasibility, degree of the child's participation and attractiveness. Trial registry data: NTR NL9383.

### RESULTS

Ninety-seven patients were randomised to either a digital (N = 53) or paper (N = 44) FVC. No significant difference in complete and accurately filled out FVCs was seen between the groups, with 35% (N = 18) for digital and 50% (N = 22) for paper,  $p = 0.12$ . Subjects considered the digital application more appealing, more educative and more inviting compared to the paper chart ( $p < 0.05$ ).

### CONCLUSIONS

In this underpowered study, no significant difference appeared between the groups in the number of complete and accurately filled out FVCs. Implementation of e-health did not seem to improve compliance. In daily practice, personal preference might offer the best solution.

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## **INCONTINENCE AND IMPAIRED TOILET TRAINING IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER**

Amy DE ROUBAIX <sup>1</sup>, Bieke SAMIJN <sup>2</sup>, Dorine VAN DYCK <sup>3</sup>, Griet WARLOP <sup>1</sup> and Lynn BAR-ON <sup>1</sup>

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### **INTRODUCTION**

A connection between developmental coordination disorder (DCD) and impaired toilet training, lower urinary tract symptoms (LUTS) and functional bowel problems is regularly observed in clinical practice, but scientific research is lacking.

### **MATERIAL AND METHODS**

Current results are part of a larger study investigating the impact of DCD on the child and its family. Parents of children aged 4 to 18 years with movement difficulties consistent with DCD were invited to complete an online survey inquiring five different domains. The results concerning toilet training and incontinence will be presented.

### **RESULTS**

Data was collected from the parents of 491 children with a mean age of 10.4 years and 75 % being male. Around 60% had one or more co-occurring conditions, with ADHD and ASD being the most common. In 48% of the children, parents reported difficulties during toilet training with a longer training period and more relapse in comparison to peers and siblings. Parents attributed this to difficulties with bladder awareness, getting to the toilet timely and wiping of the buttocks, accompanied with stool retention behaviour. No significant difference was seen when comparing children with and without co-occurring conditions. Stool problems after four years old was present in 24 % of the children. At five years of age, 28 % of the children exhibited daytime urinary incontinence and 40 % of the children had enuresis.

### **CONCLUSIONS**

Parents report impaired toilet training and incontinence problems in nearly half of children with DCD and clinicians should be aware of these problems. More studies are required to investigate cause and scope of these problems.

## **EFFECTIVENESS OF VOIDING CLASS IN CHILDREN WITH INCONTINENCE**

Bieke SAMIJN <sup>1</sup>, Catherine RENSON <sup>2</sup>, Johan VANDE WALLE <sup>2</sup>, Erik VAN LAECKE <sup>2</sup>, Ann RAES <sup>2</sup>, Lien DOSSCHE <sup>2</sup>, Piet HOEBEKE <sup>2</sup> and Anne-Françoise SPINOIT <sup>2</sup>

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### **PURPOSE**

First-line treatment for functional LUTS is standard urotherapy. The aim of the study is to evaluate effectiveness of group standard urotherapy or voiding class.

## **MATERIAL AND METHODS**

A prospective study was conducted between 2021 and 2023, including children with incontinence, aged five to twelve. Children attend voiding class in groups of four and are evaluated after eight weeks. Data is collected through bladder diaries and the validated Dutch VSSDES and PIN-Q questionnaires. Adherence was evaluated by means of the amount of documents filled in before and after voiding class.

## **RESULTS**

Fifty-eight children were included in the study (Mean age 7.3y, 71% male). 41 % of the children had combined daytime incontinence and enuresis, 55 % had isolated enuresis and 4 % had isolated daytime incontinence. Eight weeks after voiding class a transition was seen with less children experiencing combined daytime incontinence and enuresis (35 %) and two children becoming completely dry (4 %). A statistically significant decrease in the VSSDES ( $p = 0.008$ ) and adherence ( $p < 0.001$ ) was found. VSSDES and PINQ score exhibited higher scores before and after training in children with neurodevelopmental disorders, with PINQ scores reaching statistically significant differences ( $p < 0.05$ ). Twenty-two children initially presented with a small bladder capacity and demonstrated a significant increase in bladder capacity after training (52 % vs 68 %;  $p = 0.001$ ).

## **CONCLUSIONS**

Group standard urotherapy is effective for symptom reduction after eight weeks of training. Adherence and neurodevelopmental disorders could be influencing factors and should be taking into consideration.

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09:50 - 10:00

**SN1-4** (OP)

## **CAN CONNECTIVE TISSUE MASSAGE BE AN EFFECTIVE APPROACH IN CHILDREN WITH LOWER URINARY TRACT DYSFUNCTION?**

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### **PURPOSE**

Nowadays in treating LUTD, alongside pharmacology and surgery, conservative and easy-to-apply methods like urotherapy and physical therapy are increasingly prominent. Among the physical therapy approaches applied are pelvic floor muscle rehabilitation (PFMR) and connective tissue massage (CTM), which has recently started to be applied. CTM is a manual skin reflex treatment that locally affects mast cells in connective tissue through short and long tractions. This study aimed to compare CTM+PFMR with PTMR alone on uroflowmetry parameters, symptoms and quality of life.

### **MATERIAL AND METHODS**

40 children (31 boys, 9 girls), diagnosed with LUTD were divided into two groups using block randomization. Group A (G.A.) had PFMR only, supervised by a physiotherapist three times a week for eight weeks, while

Group B (G.B.) had PFMR+CTM. Pre/Post-treatment uroflow parameters (volume, Qmax, Qave, flow time, EMG activation) were evaluated with EMG-Uroflowmetry, symptoms score with Dysfunctional voiding and incontinence scoring system (DVISS), and quality of life with Pediatric Incontinence Questionnaire (PIN-Q).

## RESULTS

Children's physical and demographic characteristics in both groups were similar ( $p > 0.05$ ). When the difference analysis of the groups was made in pre/post-treatment evaluations, G.B. showed more improvement in DVISS and Pin-Q scores compared to G.A. ( $p = 0.001$ ;  $p < 0.01$ ). When comparing uroflowmetry parameters between the groups, difference was found in Qave ( $p = 0.001$ ;  $p < 0.01$ ). When the groups were evaluated within themselves as pre and post-treatment, it was found that both groups showed significant improvements in DVISS, Pin-Q scores, and uroflowmetry parameters in the post-treatment period ( $p = 0.001$ ;  $p < 0.01$ ).

## CONCLUSIONS

PFMR has positive effects on uroflowmetry parameters, symptoms and quality of life when applied both alone and with CTM. CTM applied in addition to PMFR can be more effective on certain uroflow parameters, symptoms score and quality of life by restoring the balance between the sympathetic and parasympathetic systems. In LUTD children, CTM can be applied in addition to PFMR as an accessible technique without side effects.

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10:00 - 10:10

SN1-5 (OP)

## ASSESSING HAND DEXTERITY AND UPPER EXTREMITY PERFORMANCE IN CHILDREN WITH BLADDER BOWEL DYSFUNCTION

Reyhan KAYGUSUZ BENLİ<sup>1</sup>, Ece Zeynep SAATÇI<sup>2</sup> and Halil TUĞTEPE<sup>3</sup>

1) Demiroğlu Bilim University, Division of Physiotherapy and Rehabilitation, Istanbul, TURKEY - 2) Uropelvic Solutions Pelvic Floor Rehabilitation Center, Pelvic Floor Rehabilitation, Ataşehir, TURKEY - 3) Private Tuğtepe Pediatric Urology Center, Pediatric Urology, Ataşehir, TURKEY

## PURPOSE

Lower urinary tract disorders and constipation are common symptoms of bladder and bowel dysfunction (BBD) although several studies have shown that children with BBD also have challenges with social and behavioral development, motor coordination, and development. However, no studies have examined fine motor skills or performance in children with BBD. This study aimed to compare hand dexterity and upper extremity performance of children with BBD and healthy controls.

## MATERIAL AND METHODS

The study included 38 healthy children (22 girls, 16 boys) and 34 children with BBD (21 girls, 13 boys) diagnosed by a pediatric urologist between the ages of 5-12 years. Age, gender, physical activity level and body mass index (BMI) were recorded. The Nine-hole peg test (NHPT) was used to assess hand dexterity and the T-shirt wearing test was used to assess upper extremity performance.

## RESULTS

The demographical data of both groups were similar ( $p > 0.005$ ). Physical activity duration was significantly lower in children with BBD than in healthy children ( $p = 0.001$ ). There were statistically significant differences between the

dominant and non-dominant hand NHPT times and T-shirt wearing times of healthy controls and the BBD group(p=0.08;p=0.07 and p=0.030,respectively).

Variable	Healthy Group(n=38) Mean(SD)	BBD(n=34) Mean(SD)	p*
Age(year)	8.53(0.98)	7.94(1.98)	0.550
Gender n(G/B)	22/16	21/13	0.738
Weight(kg)	25.18(5.05)	29.74(12.73)	0.455
BMI(kg/m <sup>2</sup> )	15.11(1.64)	16.81(3.54)	0.087
PA duration(h/day)	4.01(1.48)	1.78(2.21)	0.001**
NHPT Dominant hand(sn),Min-Max	21.63(2.97) (17-28)	24.82(5.72) (13.48-39.83)	0.008*
NHPT Non-dominant hand(sn),Min-Max	24.10(3.11) (18-31)	26.54(4.43) (14.58-34.45)	0.007*
T-shirt Wearing Time(sn),Min-max	9.88(3.74) (4-23)	12.41(5.45) (5.3-25.0)	0.030
T-shirt Removing Time(sn),Min-max	8.58(4.31) (3.0-21.0)	7.58(4.14) (2.68-22.86)	0.432

(Mann Whitney U Test,\*p<0,05;\*\*p<0,01)

## CONCLUSIONS

Children with BBD had lower hand dexterity and upper extremity performance than healthy controls. We think that a multidisciplinary approach and follow-up programs are critical in increasing the functional abilities of children with BBD and their accompanying conditions.

10:10 - 10:20

SN1-6 (OP)

## HEALTH-RELATED QUALITY OF LIFE CORRELATES WITH BLADDER AND BOWEL DYSFUNCTION: THE NEED FOR A NEW PATIENT-CENTERED QUESTIONNAIRE

Benjamin WHITTAM, Hannah DILLON, Rosalia MISSERI, Martin KAEFER, Kirstan MELDRUM, Joshua ROTH, Pankaj DANGLE, Richard RINK and Konrad SZYMANSKI  
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### PURPOSE

Children with voiding dysfunction (VD), such as incontinence or urinary frequency, may report lower quality of life (QOL) compared to their peers. We aimed to understand 1) how QOL captured using existing instruments

correlates with VD severity (cross-sectional) and 2) how QOL changes with changing VD symptoms (prospective). We hypothesized that large differences in symptoms would correlate with large differences/changes in bladder-specific QOL but small differences/changes in generic QOL.

## **MATERIAL AND METHODS**

We recruited children 8-18 years old with VD at a pediatric urology clinic (June to October 2023). VD included daytime incontinence, enuresis, frequency, urgency, and dysuria. We excluded children with severe developmental delay, anatomical urological abnormalities, or history of urologic surgery. We captured demographics, symptoms (Vancouver Dysfunction Voiding Symptom Score, DVSS), and QOL (child-reported PinQ and Kidscreen-10). We calculated Pearson correlations and QOL differences corresponding with 20-point DVSS differences (cross-sectional), and we assessed changes in scores at 3 months using non-parametric tests (prospective).

## **RESULTS**

Sixty children (33 girls) at a median age of 12 years old participated. The most common reason for appointment was "urine accidents at night." Mean DVSS score was 14.8, similar to previous studies (weighted mean: 15.0,  $p=0.89$ ). PinQ scores had a moderate positive correlation with DVSS scores ( $r=0.40$ ) with a 20-point DVSS difference corresponding to a 16% PinQ difference. Kidscreen-10 scores had a moderate negative correlation with DVSS scores ( $r=-0.40$ ) with a 20-point DVSS difference corresponding to a 16% Kidscreen-10 difference. Among 16 children who completed 3 month questionnaires, DVSS improved by a median 4.3 points (+8%,  $p=0.01$ ), PinQ worsened by 1 (1.3%,  $p=0.74$ ) and Kidscreen worsened by 1.3 (1.3%,  $p=0.45$ ).

## **CONCLUSIONS**

Preliminary results indicate that previously published QOL questionnaires likely have a similar insensitivity to detect changes in QOL as VD symptoms improve. A new, patient-centered, highly specific, and sensitive health-related quality of life tool is needed for pediatric urology.

## SN2: POSTERIOR URETHRAL VALVES

Moderators: Louiza Dale (UK), Bieke Samijn (BE)

ESPU-Nurses Meeting on Thursday 18, April 2024, 10:20 - 11:10

10:20 - 10:30

SN2-1 (OP)

### COPING WITH POSTERIOR URETHRAL VALVES: THE IMPACT ON FAMILY AND PARENTAL QUALITY OF LIFE

Mandy RICKARD, Armando J LORENZO, Juliane RICHTER, Jin Kyu KIM, Michael CHUA and Joana DOS SANTOS

The Hospital for Sick Children, Urology, Toronto, CANADA

#### PURPOSE

To explore the impact of PUV on quality of life of families and compare them to healthy controls published in the literature.

#### MATERIAL AND METHODS

From December 2022-Oct 2023 we distributed the family impact module(FIM) of the PedsQL Inventory, to parents of patients with PUV. The FIM measures the impact of chronic illness on the parent and family as a whole. The maximum score is 100, with higher scores reflecting a lower illness impact. We conducted subgroup analyses to determine family impact based on age, initial surgical intervention, catheterizations (CIC) and CKD

#### RESULTS

A total of 100 families completed the questionnaire. The mean age of the child with PUV was 7+/-5 years. The overall FIM score was 74+/-19, the impact on parent was 77+/-21 and the family impact 80+/-21. Scores were significantly lower for families with children <2y (63+/-28 vs. 78+/-16; p<0.01) and while not significant, family scores were lower for children on CIC (74+/-23 vs. 83+/-19; p=0.07). The reported FIM score for a community sample was 74+/-14, which was not different from our PUV cohort (p=0.19).

	Total			Parent			Family		
	Yes	No	p	Yes	No	p	Yes	No	p
<b>CIC (n=26)</b>	71+/- 21	77+/- 19	0.26	76+/- 22	78+/- 20	0.85	74+/- 23	83+/- 19	0.06
<b>UTIs (n=42)</b>	71+/- 21	80+/- 17	0.08	74+/- 22	80+/- 19	0.24	76+/- 22	85+/- 17	0.08
<b>Urinary Diversion (n=34)</b>	71+/- 21	77+/- 19	0.22	74+/- 23	79+/- 19	0.31	76+/- 20	82+/- 20	0.25
<b>CKD (&gt;3) (n=18)</b>	72+/- 16	76+/- 20	0.56	74+/- 18	78+/- 21	0.53	77+/- 17	80+/- 21	0.56
<b>Age63+/-2878+/-16&lt;0.0169+/- 2680+/-170.0272+/-2783+/-170.03</b>									

#### CONCLUSIONS

The impact of PUV diagnosis appears to impact families of children less than 2years of age; and, while not significant, those on CIC report lower scores compared those who are not. These data may support additional mental health and social work support for these families.

10:30 - 10:40

SN2-2 (OP)

## LONG-TERM KIDNEY OUTCOMES IN CHILDREN WITH POSTERIOR URETHRAL VALVES: A POPULATION-BASED COHORT STUDY

Cal H ROBINSON <sup>1</sup>, Mandy RICKARD <sup>2</sup>, Nivethika JEYAKUMAR <sup>3</sup>, Graham SMITH <sup>3</sup>, Eric MCARTHUR <sup>3</sup>, Joana DOS SANTOS <sup>2</sup>, Rahul CHANCHLANI <sup>4</sup> and Armando J LORENZO <sup>2</sup>

1) *The Hospital for Sick Children, Paediatric Nephrology, Toronto, CANADA* - 2) *The Hospital for Sick Children, Urology, Toronto, CANADA* - 3) *London Health Sciences Centre, Lawson Health Research Institute, London, CANADA* - 4) *McMaster University, Pediatric Nephrology, Hamilton, CANADA*

### PURPOSE

To determine the risk of major adverse kidney events (MAKE) among PUV patients.

### MATERIAL AND METHODS

Population-based retrospective cohort study of all males (0-2-years) diagnosed with PUV between 1991-2021 in Ontario, Canada, identified by diagnostic codes in province-wide administrative health databases. Control cohorts were: 1) male general population and 2) male pyeloplasty patients (both 0-2-years, without PUV). The primary outcome was time-to-modified MAKE (death, chronic kidney replacement therapy (KRT; dialysis or kidney transplant), or de novo chronic kidney disease (CKD)). We censored for death, provincial emigration, or Mar 2022.

### RESULTS

We included 727 PUV, 855 pyeloplasty, and 1,013,052 general pediatric controls with a follow-up time of 16.6 years (IQR 8.6-24.5). Age at PUV diagnosis was 40 days(IQR 10-196). Throughout follow-up, 32.3% PUV patients developed MAKE vs. 0.8% of general controls. The aHR for MAKE among PUV patients was 36.6(95%CI 31.6-42.4, p<0.001) vs. general controls. The risks of CKD, KRT, hypertension, and AKI were all higher among PUV patients(Table).

Outcome	PUV patients n=727 n(%)	Pyeloplasty patients n=855 n(%)	General pediatric controls n=1,013,052 n(%)	Adjusted HR(95% CI) (PUV vs. general controls)
Major adverse kidney event (MAKE)	235 (32.3)	50 (5.8)	8198 (0.8)	36.6 ( 31.6-42.4)
All-cause mortality	17 (2.3)	Not reported (NR) for privacy due to small cell size	4355 (0.4)	2.9 (1.7-4.8)
Kidney replacement therapy (dialysis or transplant)	61 (8.4)	6 (0.7)	155 (<0.01)	130.7 (78.3-218.2)

<b>Chronic kidney disease</b>	198 (27.2)	44 (5.1)	4017 (0.4)	82.0 (70.8-94.9)
<b>Hypertension</b>	133 (18.3)	48 (5.6)	29445 (2.9)	5.7 (4.7-6.8)
<b>Acute kidney injury</b>	145 (19.9)	32 (3.7)	4513 (0.4)	27.9 (22.8-34.2)

## CONCLUSIONS

PUV patients are at increased long-term risks of CKD, KRT, hypertension, and AKI. This justifies greater kidney function and BP surveillance among children and adults with a PUV history

10:40 - 10:50

SN2-3 (OP)

## THE IMPACT OF POSTERIOR URETHRAL VALVES ON THE PHYSICAL AND PSYCHOSOCIAL QUALITY OF LIFE OF CHILDREN: A CASE FOR FOCUSING ON MENTAL HEALTH

Mandy RICKARD <sup>1</sup>, Armando J LORENZO <sup>1</sup>, Noreen GORAYA <sup>2</sup>, Juliane RICHTER <sup>1</sup>, Jin Kyu KIM <sup>1</sup>, Michael CHUA <sup>1</sup> and Joana DOS SANTOS <sup>1</sup>

1) *The Hospital for Sick Children, Urology, Toronto, CANADA* - 2) *The Hospital for Sick Children, Social Work, Toronto, CANADA*

### PURPOSE

To evaluate the physical and psychosocial quality of life (QoL) of children with PUV using and compare them to controls reported in the literature.

### MATERIAL AND METHODS

From December 2022-Oct 2023, we distributed the PedsQL Inventory, which is a validated tool for assessment of QoL in children. It provides a measure of the impact of chronic illness on physical and psychosocial QoL with a maximum score of 100. Higher scores reflect better QoL. Children >8years completed the tool themselves, otherwise parents did so on behalf of the child. We performed subgroup analyses stratified by age, initial surgical intervention, catheterization (CIC), and CKD.

### RESULTS

A total of 103 patients ages 7+/-5years completed the instrument. The total QoL score was 80+/-13, physical score was 88+/-15 and psychosocial was 76+/-16. Children on CIC scored significantly lower in the psychosocial domain compared to those who were not (68+/-22vs. 78+/-16;p=0.03) and age <2years also scored significantly lower in physical and psychosocial domains (79+/-16 vs. 90+/-14;p<0.01 and 67+/-23 vs. 77+/-17; p=0.03). When PUV patients were compared to healthy children, they scored significantly lower overall QoL scores (80+/-13 vs. 84 +/- 12; p<0.01), but when compared to other children with chronic illness, PUV patients scored significantly higher (80+/-13 vs. 74 +/- 15; p<0.01).

### CONCLUSIONS

When compared to healthy controls, PUV patients score significantly lower on overall QoL assessment. In addition children <2y of age experience lower scores across both physical and psychosocial domains and CIC

negatively impacts the emotional well-being. These data can be used to advocate for better mental health supports and social work for these children

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10:50 - 11:00

SN2-4 (OP)

## **A SEARCH FOR A CLINICAL CONSENSUS ON A RISK ASSESSMENT TOOL IN ANATOMICAL INFRAVESICAL OBSTRUCTION IN BOYS - A DELPHI STUDY**

Eeke VAN LEERSEN <sup>1</sup>, Sanne LINDEBOOM <sup>1</sup>, Rafal CHRZAN <sup>2</sup>, Tariq ABBAS <sup>3</sup>, Mirjam GARVELINK <sup>4</sup> and Rogier Paul Joseph SCHROEDER <sup>1</sup>

1) *UMC utrecht, Urology, Utrecht, NETHERLANDS* - 2) *Jagiellonian University Medical College, Pediatric Urology, Cracow, POLAND* - 3) *Sidra Medicine, Urology, Ar-Rayyan, QATAR* - 4) *Antonius Nieuwegein, Value-Based Health Care, Nieuwegein, NETHERLANDS*

### **PURPOSE**

Anatomical infravesical obstruction in boys is a common form of pathology in pediatric urology. Patients may present with various symptoms and signs at different ages. Accurate objective diagnostic modalities to diagnose anatomical infravesical obstruction in boys are lacking.

This study aims to reach a consensus on the diagnostic determinants that are important to assess the likelihood of an anatomical infravesical obstruction in boys.

### **MATERIAL AND METHODS**

A Delphi method was used to establish a list of diagnostic determinants that might lead to the diagnosis of an anatomical infravesical obstruction in boys. Consensus was reached among an international and interdisciplinary panel of seventeen experts through sequential electronic questionnaires. Rounds one and two were used to define diagnostic determinants. Round 3 was used to differentiate these regarding age.

### **RESULTS**

Both rounds received a response rate of 100%. In round one, a consensus was achieved on 44 of the total 79 items. In round two, extra consensus was achieved on 19 of the total 51 items. There was agreement that a toddler obstruction needs more additional diagnostics than a neonate. The final third round of this study used to differentiate the importance of determinants based on these age groups. Both neonates and toddlers require information from history, clinical presentation and (prenatal) ultrasound. For toddlers additionally flowmetry and urodynamics are considered relevant.

### **CONCLUSIONS**

An international group of experts agreed that a risk assessment tool on the likelihood of an anatomical infravesical obstruction in boys would be beneficial for both clinical practice and research. Using a Delphi study method, a consensus was reached on a whole set of diagnostic determinants that should be employed for such a tool. This study paves the way for future research validating the determinants in a (prospective) clinical setting.

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11:00 - 11:10

SN2-5 (OP)

# FOUR- HOUR VOIDING OBSERVATION STUDY IN POSTERIOR URETHRAL VALVES: A USEFUL TOOL TO INVESTIGATE BLADDER FUNCTION IN NON POTTY-TRAINED BOYS

Catrin GRIFFITH, Fiona MARKS, Claire FOSTER, Ellen BULLMAN, Eleanor PAGE, Abdelrahman MOHAMED and Massimo GARRIBOLI

*Evelina London Children's Hospital, Paediatric Urology, London, UNITED KINGDOM*

## PURPOSE

Posterior Urethral Valves (PUV) is a common cause of urinary tract obstruction in male patients. Early bladder management is essential to avoid progressive damage to both the upper and lower urinary tract. A 4-hour voiding observation study allows investigating bladder function as early as a few days old and can detect any unsafe parameters that requires intervention to ensure the bladder is kept safe. We aimed to review our experience and outcomes in boys with PUV

## MATERIAL AND METHODS

We retrospectively reviewed patients born with PUV who undergone 4-hour voiding observation study between 2021 and 2023. Parameters evaluated were voiding frequency, bladder capacity and emptying and clinical decisions following the assessment.

## RESULTS

A total of 37 patients were reviewed. Age ranged from 6 months to 3 years. Number of voids completed during the four-hour assessment ranged between 1-8 (average 4.5). Bladder capacity (compared to expected bladder capacity) was small in 5, normal in 24 and large in 7. Post-void residuals ranged between 0-188 ml (average 23 ml). Following the assessment, an intervention was recommended in 14 boys (38%): start or continue with toilet training with the aim of better control bladder emptying with routine double voiding (n=9), Clean Intermittent Catheterisation to commence (n=3) or continue (n=1) and laxatives (n=1). No intervention was considered required in 23 (62%) patients.

## CONCLUSIONS

Our experience highlights the importance of investigating bladder function in infancy in boys with PUV. The 4-hour voiding observational study is a simple and reproducible test that can be important for ensuring the safety of their bladder and urinary tracts

## SN3: HYPOSPADIAS

Moderators: Sarah Boulby (UK), Sofia Sjödin (SE)

ESPU-Nurses Meeting on Thursday 18, April 2024, 11:40 - 12:20

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11:40 - 11:50

SN3-1 (OP)

### ASSESSMENT OF PAIN MANAGEMENT FOLLOWING HYPOSPADIAS REPAIR

Fiona MARKS <sup>1</sup>, Sharon MOHAN <sup>2</sup>, Abdelrahman MOHAMED <sup>2</sup> and Massimo GARRIBOLI <sup>2</sup>

1) Guys and St. Thomas' Trust, Urology, London, UNITED KINGDOM - 2) Guys and St Thomas' Trust, Urology, London, UNITED KINGDOM

#### PURPOSE

Hypospadias repair can be performed as a single-stage or two-stage procedure. There is currently no standardised protocol for the use of analgesia post-operatively. We assessed patients' pain and analgesia requirement in the acute post-operative period after either a single-stage or the first of a two-stage hypospadias repair.

#### MATERIAL AND METHODS

A patient questionnaire was devised and prospectively issued to patients upon discharge. The questionnaire comprised of five questions answered daily, assessing:

- Pain frequency
- Pain duration
- Pain severity
- Doses of paracetamol administered
- Doses of ibuprofen administered

The questionnaires were filled by the patients' caregivers and returned at their dressing and catheter removal admission for analysis.

#### RESULTS

Ten questionnaires were returned. Seven patients underwent a single-stage procedure. All patients received caudal block during the operation and were discharged with oxybutynin (0.1mg/kg TDS) to reduce bladder spasms.

Age range was 13-27 months with a mean age of 20.3 months. Collectively, post-operative pain occurred most frequently on day three, although pain episodes lasted longer and were more severe on day two.

Patients undergoing the first-stage procedure experienced nearly twice as many pain episodes (mean 16) compared with their single-stage counterparts. They also experienced longer duration of pain (peak mean of 66mins vs 22mins), higher pain severity and required more analgesia (both paracetamol and ibuprofen).

#### CONCLUSIONS

Based on the findings, we propose a strategy of as-required analgesia for patients undergoing a single-stage procedure and a protocol of regular paracetamol and ibuprofen combined on discharge for 72 hours before stepping down to an as-required basis for a first-stage hypospadias repair.

11:50 - 12:00

SN3-2 (OP)

## IMPROVING THE NURSING CONTRIBUTION TO HYPOSPADIAS SURGERY

Ellen BULLMAN <sup>1</sup>, Hazem MOSA <sup>2</sup>, Massimo GARRIBOLI <sup>1</sup>, Anu PAUL <sup>1</sup>, Arash TAGHIZADEH <sup>1</sup> and Pankaj MISHRA <sup>1</sup>

1) Evelina children's Hospital London, Paediatric urology, London, UNITED KINGDOM - 2) Jenny Lind Children's Hospital, Paediatric urology, Norwich, UNITED KINGDOM

### PURPOSE

Hypospadias is a common penile congenital anomaly that affects 1:200 boys. Hypospadias surgery has both short- and long-term complications. A significant nursing contribution is often required in the first post operative week. We aimed to improve the nursing knowledge and confidence about providing care to patients who recently underwent hypospadias surgery.

### MATERIAL AND METHODS

A 7 question Questionnaire identifying staff nurses experience and knowledge of hypospadias nursing using a 5-point Likert scale. A structured nursing-centred workshop with emphasis on two clinical scenarios: hypospadias dressing removal and receiving a phone call from a parent of a hypospadias patient asking for advice. Training was delivered to band 5 (newly qualified) nurses on the nephro-urology ward of a tertiary paediatric urology centre over the period of 2 weeks.

### RESULTS

15 nurses participated in the hypospadias training workshop. Questionnaire responses pre and post training were collected. Statistical analysis was performed using an independent t-test to compare responses pre and post training. A significant improvement in responses to the 7 questions was noted (table 1). An instructional video demonstration of hypospadias dressing removal by a paediatric urology clinical nurse specialist was produced to ensure continuity of the quality improvement initiative. A flow chart of the dressing removal procedure was also produced.

	Pre-training	Post-training	P value	Question theme
Question 1	1.5	4.5	0.00	Types of hypospadias
Question 2	1.5	4.4	0.00	Hypospadias operations
Question 3	2.8	3.9	0.01	Dressing removal
Question 4	2.1	4.2	0.00	Short-term complications
Question 5	2.3	4.2	0.00	Managing postoperative complications
Question 6	2.3	4.2	0.00	Giving phone advice
Question 7	2.2	4	0.00	Hypospadias referral for escalation
Free text response	0.1	0.8	0.00	

## CONCLUSIONS

A focused nursing-centred training can increase nursing staff knowledge and confidence about managing patients with hypospadias. A sustainable mode of training delivery is needed to ensure training of newly qualified nurses.

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12:00 - 12:10

SN3-3 (OP)

## A SIMPLE NOVAL TRICK TO PREVENT THE DRESSING FROM STOOL CONTAMINATION IN CHILDREN UNDERGO HYPOSPADIAS SURGERY: HYPOSPADIAS PAD

Abdurrahman ONEN

*Dicle University Medical Faculty, Pediatric Surgery and Urology, Sur, TURKEY*

### PURPOSE

The clinical indication of a specific dressing is based upon the protective function and mechanical barrier of the tissues against contamination and reduction of infection in children underwent genital surgery. The correct choice of dressing is still challenging. The most important point is to prevent contamination of the surgical area with stool. We developed a special noval pad to prevent stool contamination in infant under go hypospadias repair.

### MATERIAL AND METHODS

It is specially designed for infants who has not toilette training and wear diaper. The size of the this noval pad is 15 x 10 cm and has two adhesive wings each 10 cm. One adhesive wing is attached to perineum and distal part of scrotum, while the opposit wing is attached to the diaper. The adhesive long side of the pad is attached to each leg. We have educated and participated parent regarding this pad. Indications of our hypospadias pad is all kind of genital surgeries include hypospadias, epispadias, bladder exstrophy, burried penis, circumcision etc.

### RESULTS

We prospectively used this special genital pad in 221 infants; 124 hypospadias, 13 epispadias, 16 burried penis, 5 bladder exstrophy and 63 circumsicion. We compared this group with 214 control infants who we did not use this pad that underwent a genital surgery. Stool contamination was observed in 4/221(1.8%) special pad group while it observed in 37/214(17.3%) control group.

### CONCLUSIONS

The proposed material (hypospadias pad) seems to be a highly satisfactory alternative in improving post-operative care after hypospadias surgery. Its use is adequate for prevention of stool contamination after all kind of genital surgeries.

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12:10 - 12:20

SN3-4 (OP)

# USE OF HYPERBARIC OXYGEN THERAPY(HBOT) IN TREATMENT OF POSTOPERATIVE GLANS ISCHEMIA AFTER DISTAL HYOSPADIAS SURGERY

Mehmet Ugur YILMAZ<sup>1</sup> and Tubanur BALTA SARI<sup>2</sup>

1) Diyarbakir Children's Hospital, Paediatric Urology, Diyarbakir, TURKEY - 2) Gazi Yasargil Training and Research Hospital, Underwater and Hyperbaric Medicine, Diyarbakir, TURKEY

## PURPOSE

We aimed to present the hyperbaric oxygen therapy(HBOT) results of five patients who were operated for distal hypospadias and developed glans ischemia.

## MATERIAL AND METHODS

Five patients who received HBOT after hypospadias surgery between October 2022 and April 2023 were included in this study. HBOT protocol was carried out in 2.4 ATA(atmosphere absolute)/45 fsw(feet sea water) and treatment time was 120 minutes. The number of sessions were determined individually for each patient. Before and after therapy penile shaft and glans of the patients were photographed.

Patient s	Age(year s old)	Diagnosis	Surgical Method	HBOT Initiation Date(Postoperative)	Number of HBOT Sessions Received	Additional Intervention
1	10	Coronal Hypospadias	TIP(Tubularized Incised Plate) Repair	7th Day	14	One Session of Urethral Bougie Dilation
2	1	Coronal Hypospadias	MAGPI(Meatal Advancement and Glanuloplasty)	1st Day	9	
3	3	MIP(Megameatus and Intact Preputium)	Duplay	4th Day	5	Two Sessions of Urethral Bougie Dilation
4	3	MIP	Duplay	1st Day	9	
5	2.5	Glanular Hypospadias and Concealed Penis	MAGPI and Concealed Penis Correction	1st Day	6	

## RESULTS

Patients who developed glans ischemia were treated for the formation of necrosis demarcation line and to support wound healing. It was observed that the ischemic status improved in all patients from the first session of

treatment. All patients were discharged when the wound epithelisation started after the ischemia line was demarked. Wound healing was better in patients with early detection of glans ischemia and whose sessions were started more quickly. Urethral strictures requiring urethral dilation developed in patients who started their sessions later than others.

## **CONCLUSIONS**

We believe that HBOT treatment in the early period is important to prevent progression to necrosis and reduces early and late complications in cases of postoperative glans ischemia after hypospadias surgeries.

## SN4: NEUROPATHIC BLADDER

Moderators: Hanny Cobussen (NL), Anka Nieuwhof-Leppink (NL)

ESPU-Nurses Meeting on Thursday 18, April 2024, 15:10 - 15:30

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15:10 - 15:20

SN4-1 (OP)

### NON-INVASIVE EVALUATION OF INCONTINENCE IN CHILDREN WITH CEREBRAL PALSY

Bieke SAMIJN <sup>1</sup>, Christine VAN DEN BROECK <sup>2</sup>, Frank PLASSCHAERT <sup>3</sup>, Mathilde JOOS <sup>2</sup> and Erik VAN LAECKE <sup>3</sup>

1) University Ghent, Ghent, BELGIUM - 2) Ghent University, Ghent, BELGIUM - 3) Ghent University Hospital, Ghent, BELGIUM

#### PURPOSE

Urinary incontinence and LUTS are common in patients with cerebral palsy (CP). Although recommended in typically developing children, non-invasive uroflow measurement is not routinely used in children with CP. The objective of the study is to investigate uroflowmetry in children with CP.

#### MATERIAL AND METHODS

A cross-sectional observational study is conducted including children with CP between five and twelve years old. Children are evaluated using uroflowmetry and the validated Dutch Vancouver Symptom Score for Dysfunctional Elimination Syndrome questionnaire.

#### RESULTS

Forty-five children were included, with a mean age of 8,3 years old and 58 % being male. 24 children (53%) were dry and 21 (47%) children were incontinent. A bell-shaped curve was most frequently seen and demonstrated by 19 (42%) children. A significant difference of flow pattern ( $p < 0.01$ ) was noted between continence status, with more than 50 % of the dry children demonstrating a bell shaped curve and children with combined daytime incontinence and enuresis demonstrating only pathologically shaped curves. Within this last group, half of them could not void despite having a filled bladder. Voided volume as percentage of expected bladder capacity for age tended to be lower (36.3 % vs. 61.8 %;  $p = 0.04$ ) in children with incontinence.

#### CONCLUSIONS

Non-invasive uroflow measurement could be useful in children with CP. Depending results, redirection to invasive urodynamic evaluation can be necessary. Special attention should be given to those who have combined daytime incontinence and enuresis and cannot void on uroflowmetry.

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15:20 - 15:30

SN4-2 (OP)

# EFFICACY OF PERCUTANEOUS TIBIAL NERVE STIMULATION (PTNS) IN CHILDREN WITH DYSFUNCTIONAL VOIDING: ARE MOTOR AND SENSORY RESPONSE RELATED TO TREATMENT EFFECTIVENESS?

Maria Laura SOLLINI <sup>1</sup>, Maria Luisa CAPITANUCCI <sup>2</sup>, Chiara PELLEGRINO <sup>2</sup>, Tiziana SERANI <sup>2</sup>, Tiziana LORETI <sup>2</sup>, Giada GERVASI <sup>2</sup> and Giovanni MOSIELLO <sup>2</sup>

1) *University of Rome Tor Vergata, Clinical Sciences and Translational Medicine, Department of Physical and Rehabilitation Medicine, Rome, ITALY* - 2) *Bambino Gesù Children Hospital, Department of Neuro-Urology and Continence Surgery, Rome, ITALY*

## PURPOSE

Percutaneous Tibial Nerve Stimulation (PTNS) is well tolerated in children and is used to treat dysfunctional voiding (DV). Electrical stimulation performed by PTNS determines a sensory and a motor response, that is not always present, particularly in children. Aim of the study is investigate results of PTNS treatment in relation to toes' plantar flexion.

## MATERIAL AND METHODS

We retrospectively evaluated patients affected by LUTS with a diagnosis of DV arrived at our center and subject to PTNS treatment from September 2021 to June 2022. All patients performed 12 sessions, 30 minutes, of PTNS, once a week. At the end of treatment all children have been evaluated regarding improvement of urological symptoms.

## RESULTS

We enrolled 11 children (6 M - 5 F; 11,6±3 yrs), 10 affected by DV and 1 affected by neurogenic bladder resulting from transverse myelitis. All patients completed the sessions without reporting discomfort or pain. While sensory response was reported by each patient, motor response was present only in 6/11 children (54,5%). An improvement of symptoms at the end of treatment was referred in 3 of them. About 5 patients (45,5%) without motor response, 4 of them referred benefit from treatment. An improvement of LUTS was referred by 7/11 children (63,6%).

## CONCLUSIONS

In our small group, PTNS results seem to be not correlated with motor response. Future studies are required including urodynamic examination during PTNS, comparing the use of PTNS and Transcutaneous tibial nerve stimulation, and a special focus on role of plantar toe flexion in neurogenic patients.

## SN5: MISCELLANEOUS 1

Moderators: Hanny Cobussen (NL), Anka Nieuwhof-Leppink (NL)

ESPU-Nurses Meeting on Thursday 18, April 2024, 15:30 - 16:00

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15:30 - 15:40

SN5-1 (OP)

### REVIVAL OF THE POTTY FEEDING CHAIR: AN ONLINE SURVEY

Lola BLADT<sup>1</sup>, Vanhoutte NELE<sup>1</sup>, Dante TEUGELS<sup>1</sup>, Elien WILLE<sup>1</sup>, Thomas DE JONGH<sup>1</sup>, Lukas VAN CAMPENHOUT<sup>1</sup>, Gunter DE WIN<sup>2</sup> and Alexandra VERMANDEL<sup>2</sup>

1) University of Antwerp, Product Development, Antwerp, BELGIUM - 2) University Hospital Antwerp, Urology, Edegem, BELGIUM

#### PURPOSE

Approximately 1 in 5 children experience toileting refusal for bowel movements, which can lead to stool withholding and constipation. Previous generations in Belgium used a feeding chair with a bottom opening for feces collection, allowing children to experience bowel movements without a diaper during meals by exploiting the gastro-colic reflex. Despite its potential benefits, the potty feeding chair has largely disappeared from use. The aim of this study was to identify the potential reasons behind its disappearance and decline in popularity.

#### MATERIAL AND METHODS

We conducted 8 face-to-face interviews and gathered online survey responses from 121 recent parents with at least one child under the age of 7. Among the survey respondents, the majority were female (93%), and a significant portion fell within the 25-35y age range (54%).

#### RESULTS

Most respondents (67%) expressed reluctance to use the potty feeding chair, primarily due to concerns about the lack of separation between eating and toileting (80% mentioning it as one of their top 3 concerns), hygiene (78%), and smell (74%). While a child wearing a diaper can also experience bowel movements during a meal, some parents may misinterpret the potty feeding chair as a replacement for a potty to teach appropriate toileting behavior. Instead, it should be seen as a preparatory tool for potty training to help children get accustomed to the sensation of a bowel movement without a diaper. Notably, this aligns with the top perceived benefits of the chair, including experiencing this sensation of a bowel movement without a diaper (mentioned by 64% as one of their top 3 benefits), ease of use (62%) and prevention of constipation (58%).

#### CONCLUSIONS

Our research indicates reluctance to use the potty feeding chair. However, redesigning it to address parental concerns and raise awareness about its intended purpose holds promise for preventing pediatric bowel problems and facilitating toilet training.

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## IS URINARY RETENTION COMMON AFTER INTRAVESICAL BOTULIN TYPE-A TOXIN: A SINGLE CENTER REVIEW

Anastasia GLIATIS, Kristina GAM, Katherine STAHOVIK and Mohan GUNDETI  
 University of Chicago, Surgery, Urology, Chicago, USA

### PURPOSE

For patients with an overactive bladder refractory to medical management, intravesical injection of Botulinum Type-A Toxin (BTX-A) has become a treatment option. One potentially serious complications of BTX-A that is pre-operatively discussed with patients/parents is the risk of urinary retention with the possible need for intermittent catheterization for an extended period, following the procedure. Other side effects are urinary tract infection and hematuria. The aim of this study is to determine if urinary retention is a true risk of BTX-A injection procedure.

### MATERIAL AND METHODS

19 pediatric patients with a diagnosis of neurogenic bladder or non-neurogenic neurogenic bladder, who had failed medical management, were included in this study. Chart review for indications, operative reports, voiding diaries, Urodynamics/Uroflow studies, and side effects were reviewed.

Each patient had between 1-6 injections, based on their symptoms and Urodynamics results.

### RESULTS

A total of 100 injections were performed with follow-up ranging from 4-185 months.

None had urinary retention following BTX-A injection, in this study.

Patient Data	# of Patients
Total patients	19
Total injections at single center	100
Average time for patient follow-up	65.32 months
Patients with dx neurogenic bladder	11 (58%)
Patients with non-neurogenic bladder/idiopathic	8 (42%)
Patients previously managed with anticholinergic medications	19 (100%)
Bladder capacity average % change	135.3mL
Resolution of daytime symptoms	17 (89%)
Side effects after BTX-A injection	
UTI	3 (15%)
Urinary retention	0 (0%)
Hematuria	0 (0%)

### CONCLUSIONS

Urinary retention was not a side effect of the BTX-A procedure, in our patient population. The most common was a UTI. There is a scope for revisiting the counseling for these patients, as possible urinary retention does raise anxiety in most patients/families.

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15:50 - 16:00

SN5-3 (OP)

## **PATIENT-CENTRIC INSIGHTS: CREATIVE SESSIONS ON UROTHERAPY PRODUCTS**

Lola BLADT <sup>1</sup>, Anka NIEUWHOF-LEPPINK <sup>2</sup>, Rose-Farah BLOMME <sup>1</sup>, Gunter DE WIN <sup>3</sup>, Alexandra VERMANDEL <sup>3</sup> and Lukas VAN CAMPENHOUT <sup>1</sup>

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### **PURPOSE**

Urotherapy is the recommended first-line treatment for children with lower urinary tract symptoms, but patient compliance and motivation are low. The traditional urotherapy supporting products are often paper-based solutions with limited use of modern technology. The objective is to gain a deeper understanding of the experiences, needs, and desires of pediatric patients in regards to urotherapy supporting products.

### **MATERIAL AND METHODS**

Qualitative research was conducted using focus groups and co-creation techniques with children following in-hospital urotherapy group training. Children actively participated in a variety of creative exercises, including crafting collages to express personal experiences, providing feedback on both existing and innovative urotherapy products through pen and paper exercises, and drawing a superhero who, like them, happens to have a bladder problem. With consent, all sessions were recorded for thematic analysis.

### **RESULTS**

A total of 7 sessions were conducted with 5 groups of children (N=19; M:13, F:6; age range 9-13y), lasting 1.5 to 2 hours each. Important findings were the influence of peers, the changing context of product use (e.g. home versus school), and the intrinsic motivations portrayed through different superhero traits. These included superpowers to make bullies wet their pants, a diaper man with an unlimited diaper supply, a superhero with a wetting alarm and gender-specific accessories with superpowers to prevent urination while wearing them. Furthermore, children recognized the value of the urotherapy supporting products, yet identified opportunities for improvement, like incorporating gamification and smart technology to increase their appeal and motivation for usage. These desires align with their positive feedback on innovative ideas, such as a urotherapy ecosystem comprising interconnected products for monitoring both fluid intake and output, employing smart and engaging alerts.

### **CONCLUSIONS**

These findings highlight the importance of considering social dynamics, environmental contexts, individual motivations and child engagement in the design and selection of urotherapy products.

## SN6: MISCELLANEOUS 2

Moderators: Babett Jatzkowski (SE), Fiona Marks (UK)

ESPU-Nurses Meeting on Friday 19, April 2024, 08:50 - 09:30

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08:50 - 09:00

SN6-1 (OP)

### EXPLORING PATIENTS' EXPERIENCE OF APPLYING AND WEARING EMG ELECTRODES DURING A BLADDER FUNCTION ASSESSMENT

Ellen BULLMAN, Eleanor PAGE, Fiona MARKS, Griffith CATRIN, Kay RUTH, Claire FOSTER, Keisha HEPBURN and Massimo GARRIBOLI

*Evelina London Children's Hospital, Paediatric Urology, London, UNITED KINGDOM*

#### PURPOSE

Electromyography (EMG) electrodes are used during Bladder Function Assessments (BFA) to analyse pelvic floor and abdominal EMG activity during voiding. This can indicate dysfunctional voiding, underactive bladder and obstruction. EMG can be associated with discomfort, embarrassment and dislike. We aimed to explore patients' expectations and feelings about having the EMG electrodes applied and worn throughout the assessment.

#### MATERIAL AND METHODS

A questionnaire was prospectively given to all patients attending for a BFA. Patients were asked to rate on a scale of 0-10 (0 being the weakest and 10 being the strongest) how embarrassed, happy, worried, scared and okay they felt about having the electrodes applied. We also explored whether they felt the EMG influenced their void. Finally, we explored how the experience met their expectations. Results are presented as median (range).

#### RESULTS

Data was collected from 7 patients. Embarrassment scored 4 (0-5), happiness 8 (0-10), worry 3 (0-7), fear 1 (0-10) and okay 9 (5-10). Only 1 patient found having the electrodes applied bad and 5 found the electrodes uncomfortable once they had been applied. Only 1 patient felt their void was not representative because of the electrodes. 3 patients found the experience worse than expected, 2 as expected and 2 found it better than expected.

#### CONCLUSIONS

EMG electrodes are generally well tolerated during a BFA and do not influence the void. This small cohort did not allow significant conclusions to be generated but emphasizes the importance of adequate preparation. This study is ongoing to capture a larger cohort.

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09:00 - 09:10

SN6-2 (OP)

## **EFFICIENCY OF UROTHERAPY IN PATIENTS WITH BLADDER EXSTROPHY AFTER CREATION OF A CONTINENT STOMA.**

Christina HEUBERGER <sup>1</sup>, Thomas BÄUMLER <sup>1</sup>, Wolfgang RÖSCH <sup>1</sup> and Aybike HOFMANN <sup>2</sup>

1) *Clinic St. Hedwig in Cooperation with University Regensburg, Pediatric Urology, Regensburg, GERMANY* - 2)

*Clinic st. Hedwig in Cooperation with University Regensburg, Paediatric Urology, Regensburg, GERMANY*

### **PURPOSE**

The aim of this study is to evaluate the benefits of urotherapeutically guided standardized instructions for clean intermittent self-catheterization (CISC) after the creation of a continent stoma in patients with bladder exstrophy, using a questionnaire-based approach.

### **MATERIAL AND METHODS**

43 bladder exstrophy patients who received CISC instruction after the creation of a continent stoma between 2008 and 2023 were included in the study. Participants were asked to complete a customized questionnaire consisting of 10 questions regarding inpatient CISC instruction.

### **RESULTS**

A total of 27 (62.79%) questionnaires were returned. CISC instruction for 3 patients was not provided by a urotherapist as it was conducted before the establishment of structured guidance. The majority (96%) of patients perceived the instructions to be appropriate for both children and parents. 93% consider a pre-catheterization discussion with a urotherapist to be extremely important, while nearly the half of patients desire additional standardized follow-up training. However, this follow-up should occur as needed and not at a fixed time point. 67% would find additional instructional videos beneficial, particularly those patients who did not receive urotherapeutic instruction. 81% also desired a designated urotherapist as a point of contact, especially for any subsequent inquiries and emergencies.

### **CONCLUSIONS**

Patients appear to benefit significantly from urotherapeutically supported CISC instruction. Therefore, these services should be adequately represented and reimbursed in the care of these patients.

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09:10 - 09:20

**SN6-3** (OP)

## **BLADDER EXSTROPHY-EPISPADIAS COMPLEX: THE EFFECT OF UROTHERAPY ON INCONTINENCE.**

Frank-Jan VAN GEEN <sup>1</sup>, Anka NIEUWHOF-LEPPINK <sup>2</sup>, Ruud WORTEL <sup>3</sup> and Laetitia DE KORT <sup>1</sup>

1) *University Medical Center Utrecht, Department of urology, Utrecht, NETHERLANDS* - 2) *Wilhelmina*

*Children's Hospital, University Medical Center Utrecht, Department of Medical Psychology and Urology, Utrecht,*

*NETHERLANDS* - 3) *Wilhelmina Children's Hospital, University Medical Center Utrecht, Department of Pediatric*

*Urology, Utrecht, NETHERLANDS*

### **PURPOSE**

Achieving urinary continence in children with the bladder exstrophy-epispadias complex (BEEC) is a key goal. Unfortunately, this goal is only moderately achieved by extensive surgical treatment. Undergoing repeated hospitalization and extensive operations may consequently negatively impact quality of life. We therefore believe that other, conservative treatment options should be explored in an earlier stage of incontinence treatment in BEEC patients. As part of this, an intensive urotherapy program was offered to patients with persistent incontinence after reconstructive surgery for BEEC. The purpose of this study is to evaluate the additional benefits of intensive urotherapy on incontinence after reconstructive surgery in children with BEEC.

## **MATERIAL AND METHODS**

A retrospective chart study included 33 children enrolled in an intensive urotherapy program for persistent incontinence after BEEC reconstructive surgery. Urotherapy consisted of a ten-day inpatient program with extensive supervision by experienced urotherapists. The main outcome measurement was continence based on the ICCS definition, as the percentage of children achieving continence (good result) or improvement after treatment and during follow-up.

## **RESULTS**

In 61% of cases (20/33) an improved or good result was reported on incontinence after urotherapy. Children with classic bladder exstrophy more often achieved a good or improved result (13/16; 81%), compared to children with epispadias (6/16; 38%). From the group of patients with persistent incontinence, 75% (12/16) reported that the complaints were socially acceptable at the end of follow-up.

## **CONCLUSIONS**

The study outcomes reveal that 61% of BEEC patients who participated in our urotherapy program for persistent incontinence after reconstructive surgery achieved either complete or improved continence. Furthermore, 75% of patients who did not achieve complete continence reported that the remaining incontinence was manageable. These findings strongly advocate counselling patients with BEEC to consider exploring more conservative treatment options before opting for further surgery.

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09:20 - 09:30

**SN6-4** (OP)

## **THE ROLE OF THE CLINICAL NURSE SPECIALIST IN IMPLEMENTING THE ERAS PATHWAY FOR BLADDER RECONSTRUCTION SURGERY**

Kay RUTH, Claire FOSTER, Fiona MARKS, Keisha HEPBURN, Eleanor PAGE, Ellen BULLMAN, Catrin GRIFFITH, Sharon MOHAN, Arash TAGHIZADEH and Massimo GARRIBOLI  
*Evelina London Children's Hospital, Paediatric Urology, London, UNITED KINGDOM*

### **PURPOSE**

Undergoing a bladder reconstruction represents a major burden, for patients and family. The introduction of Enhanced recovery after surgery (ERAS) protocols intends to achieve shorter hospital stays and faster recovery times. A fundamental pillar of the ERAS protocol is represented by the preparation, postoperative and post-discharge phases delivered by clinical nurse specialists (CNS).

We are responsible for making sure the family are effectively educated and supported throughout this event. Our aim is to reflect on the role of the CNS in the care of these patients within the ERAS pathway.

## **MATERIAL AND METHODS**

From April 2021 to September 2023, 14 patients have undergone bladder reconstruction surgery in our department. Patients and families were counselled and prepared for surgery through a series of appointments with a CNS. Post-operative reviews and post discharge appointments were also planned according to ERAS pathway. During the appointments the CNS takes a holistic approach; taking in to consideration clinical, social, psychological and educational factors.

## **RESULTS**

Patients had an average of 4.28 pre-admission contacts with the CNS. From day 3-4 post op the CNS visited patients daily while post discharge they made weekly phone calls. Median length of stay was 7 days. CIC was started at week 5 and catheters completely removed at week 6 post op. No surgical complications were observed and all patients successfully established CIC post-operatively.

## **CONCLUSIONS**

Bladder reconstruction is a huge and overwhelming experience for families. The role of the CNS is significant for implementing the ERAS pathway and ensuring a successful outcome for these patients.

## SN7: MISCELLANEOUS 3

Moderators: Jens Larsson (SE), Anna Giambonini (CH)

ESPU-Nurses Meeting on Friday 19, April 2024, 09:35 - 10:15

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09:35 - 09:45

SN7-1 (OP)

### AN EDUCATIONAL VIDEO ABOUT BLADDERDYSFUNCTION FOR CHILDREN AND THEIR PARENTS

Nienke KAMER-VAN DER SCHOOT <sup>1</sup>, Martine KOOIJ-VAN GENT <sup>2</sup>, Keetje DE MOOIJ <sup>2</sup> and Anka NIEUWHOF-LEPPINK <sup>2</sup>

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#### PURPOSE

Lower Urinary Tract Symptoms (LUTS) are a common condition affecting up to 20% in school-aged children. Although it's not a serious condition, it can be quite uncomfortable and often leads to feelings of embarrassment or topics that children are reluctant to discuss. This video has been created to explain the causes of LUTS and what children can do to help themselves.

#### MATERIAL AND METHODS

A popular Dutch children's TV presenter explains how the bladder and urinary tract work. She also explains the effects of bladder problems and how children can take control of their bladder problems. The format and content are based on a previously developed video by our team. This video, developed in 2005, is outdated but is still widely used. It has been viewed more than 20,000 times on You Tube. As the content and format are still very strong, it was decided to renew this film.

#### RESULTS

#### CONCLUSIONS

Many children experience LUTS, but most children and their parents are unaware of possible solutions. An engaging and easy-to-understand video that explains how the bladder works and provides an insight into the standard elements of urotherapy can empower many children to overcome their problems.

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09:45 - 09:55

SN7-2 (OP)

### WHAT MATTERS MOST? FEEDBACK FROM FAMILIES AFTER THE INTRODUCTION OF A POSTERIOR URETHRAL VALVES PARENT SUPPORT GROUP

Noreen GORAYA <sup>1</sup>, Lauren ERDMAN <sup>2</sup>, Armando J LORENZO <sup>3</sup>, Juliane RICHTER <sup>3</sup>, Joana DOS SANTOS <sup>3</sup> and Mandy RICKARD <sup>3</sup>

1) *The Hospital for Sick Children, Social Work, Toronto, CANADA* - 2) *The Hospital for Sick Children, Centre for Computational Medicine, Toronto, CANADA* - 3) *The Hospital for Sick Children, Urology, Toronto, CANADA*

## **PURPOSE**

To describe the implementation of a virtual support group for parents of children with PUV and their lived experience.

## **MATERIAL AND METHODS**

The support group was initiated in January 2023 and is led by a social worker. The format of the sessions range from open discussions between families to dedicated topics. Upon completion, participants are asked to complete a survey about their experiences of parenting a child with PUV. Survey questions include parent and child demographics, their PUV knowledge level, and exploratory questions about their lived experiences. Responses were summarized as sample statistics where possible and coded for summarization where long-form answers were provided.

## **RESULTS**

A total of 38 participants completed the survey. The median age of the child was 3.5y(0-16), mother's age was 36y(19-55) and father 38y(19-50). Most ranked their PUV knowledge level as limited or average (63%). In response to the 3 most important topics parents want to know about, the majority were concerned about quality of life(QoL) (17), kidney function(14), and disease course(14). In response to the 3 things parents are most worried about, most stated the need for future interventions such as transplant/dialysis(16), followed by QoL(12), and catheterization(11). The issues parents most want providers to know about what it's like to have a child with PUV is that they have fear and anxiety (17), they feel mental health should be more prioritized(3), and expenses associated with care are a burden(2).

## **CONCLUSIONS**

Families of children with PUV feel isolated due to the condition's rarity. The main things they worry about are the long-term implications for their child, including kidney function, the need for transplant, potential need for catheterization and QoL. The overall feedback is reassuring and these data may prove helpful when advocating for resources for this population.

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09:55 - 10:05

SN7-3 (OP)

## **THE USE OF VIRTUAL SIMULATION TO TEACH UROLOGY NURSES CARE OF COMPLEX UROLOGY PATIENTS.**

Claire FOSTER <sup>1</sup>, Elizabeth MOORE <sup>2</sup> and Anu PAUL <sup>1</sup>

1) *Evelina London Children's Hospital, Paediatric Urology, London, UNITED KINGDOM* - 2) *Evelina London Children's Hospital, Paediatric Urology- Education, London, UNITED KINGDOM*

## **PURPOSE**

Training new generations of nurses is paramount to maintain high quality care for every patient and particularly to those undergoing complex reconstructive procedures. The onset of the Covid pandemic made it not possible to organise face-to-face practical courses but gave us the opportunity to develop an alternative method to teach. We created a virtual simulation presenting an unfolding scenario of a patient becoming acutely unwell following bladder reconstruction surgery. We aimed to gain feedback from the students to assess the effectiveness of the new teaching format and highlight any areas for improvement.

## **MATERIAL AND METHODS**

We invited students to respond to a qualitative and free text questionnaire on google which was made available via web link.

## **RESULTS**

17 of the 30 students (57%) over 3 years completed the feedback. All respondents were happy watching a recorded simulation and reported that it was a positive learning opportunity.

Students valued the opportunity to observe, reflect and discuss the case and felt they improved their knowledge of caring for a patient post bladder reconstruction.

## **CONCLUSIONS**

The introduction of a virtual simulation in the teaching of complex urology conditions and surgery has been very well received. We have recently updated our recording to include a more complex and diverse post-operative scenario. We have been able to provide a high level of theory and practical knowledge using this format.

Feedbacks have highlighted the positive benefits of using video technology and virtual simulations to provide teaching across a wider audience nationally and possibly internationally.

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10:05 - 10:15

**SN7-4 (OP)**

## **NURSES LEADING THE WAY IN ENHANCED RECOVERY AFTER SURGERY**

Katie CLEARY<sup>1</sup>, Ganesh VYTHILINGAM<sup>1</sup>, Kevin CAO<sup>1</sup>, Roger IDI<sup>1</sup>, Neetu KUMAR<sup>1</sup>, Imran MUSHTAQ<sup>1</sup>, Abraham CHERIAN<sup>1</sup>, David DE BEER<sup>2</sup> and Navroop JOHAL<sup>1</sup>

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### **PURPOSE**

Enhanced recovery after surgery (ERAS) is a multidimensional approach, enabling patients to be the principals of their own recovery as well as empowering nurses to take an active role in clinical decision making. The cost and resource utilisation benefits of ERAS in paediatric urology are substantial but the process of engaging nurses to lead on ERAS is not well described. We present on the essential role of nurses in the implementation of this and how we can take a leading role in improving post-operative care and progress.

In 2018, we set up a multidisciplinary team to identify elements of post-operative care which hinder good recovery. We established which of those elements are nurse-critical and created a protocol with key nurse-led interventions to empower nurses to take steps in progressing patient recovery.

## MATERIAL AND METHODS

We present the process of identifying key nurse-led interventions and engaging nurse participation:

1. Interviews with key players
2. Training
3. Shared protocol writing
4. Pilot programme
5. Feedback sessions

This resulted in the data capture of 40 patients undergoing bladder reconstruction over two years.

We also established a nurse-led quality of life and cost-effectiveness assessment framework, empowering nursing staff to assess the outputs of new quality improvement programmes.

## RESULTS

<b>Nurse-Led Interventions</b>	<b>Nurse-Led ERAS (mean no. of days post-op)</b>	<b>Doctor-Led Traditional Care (mean no. of days post-op)</b>	<b>Impact of Nurse-Led Care (days)</b>
<b>Removing Nasogastric Tube</b>	2	4	-2
<b>Stopping Intravenous Fluids</b>	5	7	-2
<b>Allowing Oral Intake</b>	1	4	-3
<b>Mobilising to Chair</b>	2	6	-4

## CONCLUSIONS

In our experience, nurse-led ERAS enables early discharge with no reduction in clinical outcomes and no significant reduction in patient satisfaction compared to traditional management. We wish to present our experience with establishing this programme and impart our learning to other nursing teams who wish to create these programmes at their centres, as well as how to establish a complete package assessment framework. There are dramatic advantages in empowering the most valuable players in post-operative recovery - nurses.

## SN8: MISCELLANEOUS 4

Moderators: Alexandra Vermandel (BE), Tinne van Aggelpoel (BE), Angela Downer (UK)

ESPU-Nurses Meeting on Friday 19, April 2024, 11:10 - 11:40

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09:55 - 10:05

SN8-1 (OP)

### **THE EXPERIENCE OF PARENTS AND HEALTH PROFESSIONALS IN THE DECISION-MAKING PROCESS FOR THE LONG-TERM SUPRAPUBIC CATHETER IN PEDIATRICS: A EMBEDDED SINGLE CASE STUDY.**

Njomza ZENUNI <sup>1</sup>, Veronika WALDBOTH <sup>2</sup> and Brigitte SELINER <sup>3</sup>

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#### **PURPOSE**

Background: The insertion of long-term suprapubic catheter (LSBK) is considered a non-standard medical intervention in paediatrics and is only used in rare cases for children with complex chronic conditions or disabilities. Due to the rarity of the situation, health professionals often lack knowledge to support parents in decision-making around LSBK.

Aim: To describe the experiences and support needs of parents of children with LSBK while focusing on the decision-making process and lived experience of LSBK.

#### **MATERIAL AND METHODS**

Methods: An embedded single case study with semi-structured interviews (September to December 2022) was conducted with parents of four children with LSBK and three health professionals from different settings. In addition, patient documentation was analysed in detail. The within-case analysis was based on a structured content analysis of the interviews, supplemented with the description of the individual medical histories, followed by a comparative cross-case analysis.

#### **RESULTS**

Results: The in-depth analysis of the four units of analysis resulted in four categories with two subcategories: Experiences of the decision-making process and support needs in this process, additionally the challenges and the benefits of living with an LSBK and support needs regarding self-management.

#### **CONCLUSIONS**

Conclusion: The LSBK was the best possible option for longer-term urinary diversion for all families. The children's well-being was paramount for the parents in decision-making. The families and professionals emphasized the need for support in the decision-making process and in long-term self-management. Important aspects are patient- and family-centred decision-making, holistic support in self-management and good interprofessional cooperation.

## **ROBOTIC REPAIR OF REFRACTORY CONGENITAL VESICO-URETHRO-VAGINAL FISTULA SECONDARY TO CECOURETEROCELE IN 12 YEARS OLD GIRL**

Thomas LOUBERSAC<sup>1</sup>, Hortense ALLIOT<sup>1</sup>, Flavie SADONES<sup>2</sup>, Fabrizio VATTA<sup>1</sup>, Sebastien FARAJ<sup>1</sup> and Marc-David LECLAIR<sup>1</sup>

1) *University Hospital of Nantes, Paediatric Urology, Nantes, FRANCE* - 2) *University Hospital of Nantes, Paediatric Radiology, Nantes, FRANCE*

### **PURPOSE**

We report here the case of a 12-year-old female patient who underwent robotic-assisted laparoscopic surgery for a vesico-urethro-vaginal fistula.

### **MATERIAL AND METHODS**

The girl underwent a left nephro-ureterectomy at the age of one year for a symptomatic non-functioning kidney with ureterohydronephrosis. At the age of three she developed total urinary incontinence. Endoscopy revealed a ceco-ureterocele with a vesico-vaginal fistula. Reconstructive surgery was performed with transvesical closure of the vesico-vaginal fistula and urethro-cervicoplasty. Total urinary incontinence recurred at the age of five years. Endoscopy confirmed the recurrence of the vesico-vaginal fistula. Further surgery was performed at the onset of puberty for vulvovaginitis secondary to the fistula. A uro-MRI revealed a vesico-urethrovaginal fistula. Robotic laparoscopic repair of the fistula with omentum interposition was proposed.

### **RESULTS**

The operation was performed under general anaesthesia in the lithotomy position with tredelenburg of 20°. The operation began with a urethrocystoscopy which revealed the fistulous orifice between the vagina, urethra and bladder. A 13F Cystodrain was placed through the fistula between the vagina and the bladder then a 14F urethral catheter.

We began by laparoscopy, dissecting between the bladder and the vagina to the fistula. The fistula was easily found with the cystodrain. The cystic cavity and fistulous tract are resected. The posterior surface of the urethra, bladder and vagina were closed. The robot was placed in the upper abdominal position to free the omentum, which is then interposed between the urethra and vagina. The operation lasted 241 minutes and the patient was discharged on D2. The urethrovesical catheter was removed at D14 after cystography had checked that there was no residual fistula. At 6 months, there was no recurrence of the fistula or urine leakage.

### **CONCLUSIONS**

The cure of vesico-urethro-vaginal fistula by robot-assisted laparoscopy, even after urethro-cervicoplasty, seems possible in children.

Maria Laura SOLLINI <sup>1</sup>, Maria Luisa CAPITANUCCI <sup>2</sup>, Chiara PELLEGRINO <sup>2</sup>, Giada GERVASI <sup>2</sup>, Tiziana LORETI <sup>2</sup>, Tiziana SERANI <sup>2</sup> and Giovanni MOSIELLO <sup>2</sup>

1) *University of Rome Tor Vergata, Clinical Sciences and Translational Medicine, Department of Physical and Rehabilitation Medicine, Rome, ITALY* - 2) *Bambino Gesù Children Hospital, Department of Neuro-Urology and Continence Surgery, Rome, ITALY*

## **PURPOSE**

Transanal Irrigation (TAI) is a valid treatment in children with bowel dysfunction, but it is not always well accepted. We evaluated the role of pelvic floor (PF) exercises in TAI practice.

## **MATERIAL AND METHODS**

We report a case of an 11-year-old girl, affected by Anorectal Malformation (MAR) surgical treated at birth, performing bowel management with enema until 9 years old. She referred pain and poor results and TAI proposed as an alternative to classical bowel management. TAI has been refused by the patient due to referred difficulties to catheter insertion in absence of anal stenosis. A new management protocol has been proposed associating TAI training with 3 sessions (15/ days, 1 hour/session) of PF re-education, using a fitball. During sessions we explained anatomy, function of PF and mechanism of TAI, a PF evaluation was performed using an external PC test and PF exercises have been practiced using a fitball. Child simulated a self-administration of TAI too.

## **RESULTS**

During the first session, she was scared and rejected treatment. Evaluation of PF highlighted a failure to selectivity recruit of muscles. PC test was 1/5 and a difficult to relax PF was present. During third evaluation selectivity of PF had improved, PC test was 2/5 and she was able to maintain PF contraction between 2 and 5 seconds; relaxation of PF was improved, too. She successfully tried to self-administrate TAI and the mother referred the execution at home.

## **CONCLUSIONS**

PF muscle training can help all people practicing manoeuvres at the perineal level.

## SN9: POSTER SESSION

Moderators: Alexandra Vermandel (BE), Tinne van Aggelpoel (BE), Angela Downer (UK)

ESPU-Nurses Meeting on Friday 19, April 2024, 11:40 - 12:00

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11:40 - 11:47

SN9-1 (PP)

### PREPUTIAL HAIR THREAD TOURNIQUET SYNDROME (HTTS): CASE REPORT AND REVIEW OF THE LITERATURE

Rebecca DAVIES, Hazem MOSA, Azad MATHUR and Ashish MINOCHA

Jenny Lind Children's Hospital, Paediatric urology, Norwich, UNITED KINGDOM

#### PURPOSE

Hair thread tourniquet syndrome (HTTS) is a rare phenomenon where a thread of hair wraps tightly around an area of tissue impeding blood flow. Genital HTTS often occur in circumcised boys. We aimed to describe the presentation in a boy with an intact foreskin and review the literature.

#### MATERIAL AND METHODS

A 6-month-old boy presented to their local Emergency Department (ED) with one week history of foreskin swelling. An adult urologist attempted removal of a constricting hair tourniquet in ED and was unsuccessful due to baby's irritability. The baby was transferred to a tertiary paediatric urology centre for further management. Examination revealed a distal foreskin hair tourniquet with mild waisting, and a ventral granuloma. Parental wish was foreskin preservation. Under General anaesthesia and penile block, release of the hair tourniquet was performed. Ventral granuloma was excised and sent for histopathological assessment. Ventral foreskin was reconstructed transversely to widen the preputial opening and improve foreskin retractility. This was performed using interrupted 6-0 polydioxanone. Examination of the glans and distal urethra revealed no concomitant injury.

#### RESULTS

The patient had an uneventful recovery and was discharged the next day. Literature review of male genital HTTS revealed only 5 reports of foreskin HTTS to date. 54 reports described HTTS affecting the penile shaft and 12 reports of urethral or meatal involvement and no cases of scrotal HTTS.

#### CONCLUSIONS

Foreskin HTTS is a very rare cause of foreskin swelling. A high index of suspicion and thorough examination can help prevent strangulation and tissue loss. Foreskin preservation can be achieved according to parental preference.

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11:47 - 11:54

SN9-2 (PP)

# FOLLOW UP FOR PATIENTS WITH POSTERIOR URETHRAL VALVES: CREATING A TRAFFIC LIGHT SYSTEM

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## PURPOSE

Posterior urethral valves (PUV) is the most common cause of bladder outlet obstruction in males and it accounts for one quarter of all paediatric renal transplants in the United Kingdom. Patients have a range of severity of symptoms, from LUTS to renal failure.

Waiting lists for hospital appointments and procedures are becoming a real concern lately and delayed appointments can increase the risk of complications.

In order to avoid missing appointment for fragile/at risk children, we categorised them to prioritise those with higher clinical risk factors.

## MATERIAL AND METHODS

We reviewed charts of our current cohort of 275 patients under active follow up and categorised them according to the following traffic light system, based upon kidney and bladder function:

1. Red - less than one year from diagnosis, a glomerular filtration rate (GFR) of less than 50ml/min/1.73m<sup>2</sup>, an indwelling suprapubic catheter or ostomy.
2. Amber - a GFR of 50-80ml/min/1.73m<sup>2</sup>, solitary kidney, high grade vesicoureteral reflux (VUR), recurrent UTIs, clean intermittent catheterisation or bladder medication.
3. Green - normal kidney function, not on bladder management.

## RESULTS

Based on the above system, 64 patients were classified as red, 114 amber and 97 green. Taking this forward, we are ensuring that all red and amber patients are made a priority for investigations and follow up.

## CONCLUSIONS

Using the proposed traffic lighting system, we can identify patients with risk factors for developing bladder and kidney damage. This allows us to prioritise their investigations and follow up which can influence their prognosis.