Highlights from Thursday 23rd June

Milan Gopal
• Vesico ureteric reflux
• Imaging and Nephrology
• Extrophy – Epispadias
• Augmentation and Diversion
• My Worst Complications
• John Duckett Lecture
• Prenatal Urology
• Circumcision
• Lower urinary tract -1
Vesicoureteric reflux

TIMING AND INCIDENCE OF ADDITIONAL OPERATIVE INTERVENTIONS AFTER ENDOSCOPIC TREATMENT OF VESICOURETERAL REFUX (VUR)

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15% re intervention rate within 5 years
Most occurred within the first year
80% radiological resolution vs 90% clinical resolution

Outcomes can be based on clinical improvement rather than VCUG result
HISTOPATHOLOGICAL CHANGES ASSOCIATED WITH POLYACRYLATE POLYALCOHOL BULKING COPOLYMER (PPC, VANTRIS) INJECTION FOR PAEDIATRIC VESICOURETERAL REFUX (VUR)

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2470 patients (680 Vantris, 1790 Deflux)
1.2% in Vantris group and 0.8% in Deflux group developed obstruction
No double HIT and average injected volume of 0.3ml in vantris group

Obstruction can occur even as late as 5 years post injection

Pathological response found during reimplanation were the same in both groups
It is the ureter characteristics and not the substance used that leads to obstruction
IS THE VESICOURETERAL REFLUX INDEX (VURX) A RELIABLE TOOL TO PREDICT WHICH PRIMARY VESICO-URETERIC REFLUX (VUR) PATIENTS WILL SUFFER BREAK-THROUGH URINARY TRACT INFECTION (UTI)?

★ SCARRING ON DMSA IS THE MOST SIGNIFICANT PREDICTOR OF BREAK-THROUGH FEBRILE URINARY TRACT INFECTION (UTI) IN PATIENTS WITH SIMPLEX AND DUPLEX VESICOURETERIC REFLUX (VUR): RESULTS OF A MULTIVARIATE ANALYSIS

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45 patients (33 male), mean age 3 months
56% had break through UTI despite prophylaxis

VUR index was better than VUR grade at predicting risk of breakthrough UTI
Presence of scarring was better than VUR index
12,000 pregnancies over a 2 year period
4% had UTI and 0.2% had APN

Girls with untreated VUR and recurrent UTI in childhood had a higher incidence of UTI during pregnancy

Has proactive treatment of VUR in childhood led to the low incidence of APN during pregnancy?
Better prediction of VUR after doing DMSA after febrile UTI

Overall incidence of VUR detection was 31%
Reliable predictors include:
  Duplex system
  Age 1-3 yrs
  Duration of illness > 3 days
  Abnormal findings on USS
  Presence of LUTS
  Scarring on DMSA

AUC of 0.68, Sensitivity 82%, Specificity 47%
Using Diffusion Tension Imaging changes found in the lumbo sacral plexus

The beginning of the end for the term “non neurogenic neurogenic bladder”?
Comparison made to results of Ngo et al ( J Urol 2011 )

Mean Fluoroscopy time: 9.8 seconds
Mean total radiation: 0.29 m Gy

How to reduce exposure includes:
- Person doing UDS should screen
- Screen during times of peak detrusor pressure

Question from audience: do you increase the risk of missing VUR the more you reduce screening time?
After mean follow up of 5 years LBW premature babies had a similar incidence of CKD as compared to term babies (~ 35%)

This was despite other other adverse effects like oligohydraminos, length of NICU stay and creatinine levels

Prem group had a higher incidence of vesicostomy

Question from audience: Is vesicostomy a more effective drainage method compared to valve ablation?
Extrophy

407 patients with classic bladder extrophy, 143 contacted, 72 responded (50%)

94% had normal to high sexual desire

57% were satisfied with their sex life

Penile perception scores were generally low

26% had attempted pregnancy with partner, 15% were successful
Augmentation

PREGNANCY AND CESAREAN SECTION IN WOMEN WITH LOWER URINARY TRACT RECONSTRUCTION: WHAT IS THE ROLE OF THE UROLOGIST?

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2 Indiana University, School of Medicine, Pediatric Urology, Indianapolis, USA
3 Riley Hospital for Children at Indiana University Health, Indianapolis, USA

16 pregnancies in 10 women, 14 delivered by C-section
11 had new or worsening HDN
5 required nephrostomy, 7 had difficulty catheterising, 6 developed incontinence

6 scheduled C-section, remaining emergency
6/14 (43%) had intra-operative complications: 5 bladder, 1 bowel
Faecal incontinence in children with spina bifida can mask bowel habit changes caused by IBD

Normal USS at 3 months but severe HDN with gross loss of function at 14 months!
John Duckett lecture

- Dr. Richard Rink - Indiana
Both systems could predict which children had a greater risk of needing surgery or develop UTI.

In the high risk group $1/3^{rd}$ of children needed surgery at a mean of 17 months.
Only 1/3\(^{rd}\) progress and need surgery
Good prognosis if male, > 40\%, SFU 3, APD <15mm

No low grade HDN progressed
They recommend two USS in the first year of life then discharge
Circumcision

Over a 13 yr period 20 children had acute complications including 3 deaths

By 18 months post circumcision, 60 needed further surgery

Denominator not mentioned
If testis is seen – good
If testis not seen – it does not mean it is not there

Of 4 children with inconclusive USS, one was found to have a viable testis
Spontaneous descent occurred in 78 / 189 (41 %)
This is much lower than previous reported rates ~ 70%

Only 11% descent in syndromic children
12 prepubertal boys (mean age 37 months)

Testis preserving surgery could be done in $\frac{2}{3}$rd of cases and was influenced by smaller size and negative tumour markers.
101 patients between 1996-2014
Mean age at presentation was 27 months

Using an age specific creatinine reference, serum creatinine was the only independent prognostic factor predicting renal failure
VUR symposium

- Dr Tekgul
- Dr Hoebeke
- Dr Subramaniam