

Tuesday 24 June 14.00–15.00  
Paediatric Urology  
Chairmen: M. Koyle and P. Malone

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**Natural-fill, radiotelemetered fetal sheep cystometry**

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INTRODUCTION

*In utero* BOO, e.g. that caused by PUV, results in significant postnatal bladder dysfunction, but the effects on developing bladder function *in utero* are poorly understood. The aim of our study was to determine if fetal cystometric studies by radiotelemetry are feasible, thus providing a means of monitoring the influence over time of *in utero* experimental BOO.

MATERIALS AND METHODS

The procedure required fetal sheep surgery and anaesthesia. Radiotelemetry implants had catheters that transmitted pressure fluctuations to an implant body; data were then transmitted using radio waves to a receiver which passed the information to a computer. We used four fetuses and different methods of catheter placement to optimize the technique.

RESULTS

Recordings were possible in three of the four experiments. There were four patterns of discriminate bladder activity, defined as: (i) voiding (105–140 days of gestation), with sustained elevations of detrusor pressure with superimposed high-frequency, low-amplitude activity; (ii) immature void (75–105 days of gestation), with episodes of high-frequency, low-amplitude activity; (iii) staccato activity,

with short phasic elevations of pressure that were discrete, or in trains, or before and after voiding; and (iv) 'unstable' type activity, with very short increases in pressure.

#### CONCLUSIONS

Radiotelemetry cystometry for long-term monitoring is feasible in the experimental

fetus, without inducing mortality or any morbidity or inhibiting growth. The method can discriminate reproducible patterns of detrusor activity. Recorded 'voiding' types were consistent between experiments and as reported in other fetal animal studies.

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033

### Ectopic adrenocortical tissue at groin exploration: incidence in relation to age, sex and underlying pathology

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#### INTRODUCTION

Ectopic adrenocortical tissue (EACT) is found in many sites, including the inguinal region. In our unit inguinal EACT in children has routinely been removed when identified. We therefore reviewed all paediatric cases in our unit to clarify the incidence of EACT and its association with age, sex and pathology.

#### PATIENTS AND METHODS

All groin explorations in patients aged < 16 years and undertaken by one surgeon from 1992–2001 were identified from computer records. The histology records for

each patient were examined to identify cases of EACT. The frequency of EACT was analysed according to age, sex and underlying pathology, i.e. undescended testis (UDT), inguinal hernia (IH) or patent processus vaginalis (PPV).

#### RESULTS

In 576 groin explorations identified, 21 cases of EACT were found (3.6%), all in boys. The frequency of EACT with inguinal hernia was 1.2% in boys (and none in girls). In boys, the incidence of EA tissue was 4.8% for PPV, 4.3% for UDT, but only 1.2% for IH. In the largest diagnostic group (UDT) the incidence of EACT

was independent of age (0–7.9 years 4.3%, 8–15.9 years 4.2%).

#### CONCLUSION

This series of inguinal EACT is larger than any published to date as far as we are aware. The incidence of inguinal EACT appears to be related to diagnosis, as implied by other studies. Although the incidence of EACT is said to diminish with increasing age, we were unable to confirm this. We are continuing to identify cases from earlier years and cross-check with histology codes, and aim to present a statistical analysis of the full data.

034

### Genital sensation after feminizing genitoplasty for congenital adrenal hyperplasia: a pilot study

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#### BACKGROUND

There is much controversy about the long-term outcome after feminizing genitoplasty. Sexual function and attainment of orgasm appear to be closely related to sensory input. Our study assesses the neurological pathways to the clitoris and vagina involved in sexual function, in women with congenital adrenal hyperplasia (CAH) after feminizing surgery.

#### PATIENTS AND METHODS

Six subjects were recruited from a multidisciplinary intersex clinic, and represent an initial cohort from a larger ongoing study. Subjects were asked to complete a postal questionnaire with a specialised sexual functioning tool. Thermal, vibratory and light-touch sensory thresholds were assessed to the clitoris and vagina using a GenitoSensory

Analyzer (GSA Medoc Ltd), and Von Frey filaments.

#### RESULTS

All six women had highly abnormal results for sensation to the clitoris when compared with validated ranges for normal women. Only three women had an introitus capable of admitting the vaginal probe, but all three had

normal results for sensation to the vagina. The sexual function questionnaire was completed by five women, who were sexually active, and showed markedly abnormal overall scores, particularly in the areas of infrequency of intercourse and anorgasmia.

#### CONCLUSION

These pilot data confirm that there is clitoral sensory impairment in women who have had clitoral reduction surgery. This suggests that genital surgery interferes with sensory input

and sexual function. These striking findings must be evaluated further in the light of the current debate on genital surgery in CAH.

Funding: St Peter's Trust for Kidney, Bladder and Prostate Research

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#### Vaginal replacement in children and young adults

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#### INTRODUCTION

Absence or atresia of the vagina in children commonly results from a congenital abnormality, after treatment for pelvic tumours, and in patients who have had previous gender-reassignment surgery. Here, we review our experience using bowel for vaginal replacement in a group of children and young adults.

#### PATIENTS AND METHODS

Between 1990 and 2002, 19 patients underwent vaginal replacement at our institution (aged 2–18 years). Presenting diagnoses included Mayer-Rokitansky

syndrome (nine patients), androgen insensitivity syndrome (six), cloacal exstrophy (two), MURCS syndrome and vaginal tumour (one each).

#### RESULT

Sigmoid colon was used in 16 patients; ileum, ileobladder and Frank dilatation were used in one patient each. Complications included recurrent stenosis (two patients), superficial wound infection and blind loop mucocele (one each). Two patients who were operated on after puberty are known to be sexually active and both have complaints of dyspareunia, despite an adequate size of the introitus.

#### CONCLUSION

Our experience with this group of patients suggests that isolated bowel segments provide excellent tissue for vaginal replacement, can be used at any age, and are effective in varied situations such as complete vaginal absence or to augment a rudimentary vagina. If the sigmoid colon is used, the whole procedure can be done using a small Pfannenstiel incision with minimal morbidity and excellent cosmesis. The long-term satisfaction with the sigmoid neovagina for intercourse requires further investigation.

036

#### Parental satisfaction and its correlation with the 'hypospadias objective scoring evaluation' scoring system after hypospadias surgery

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#### INTRODUCTION

Parents of children with hypospadias have to decide whether their child should have corrective surgery. Their expectations of the surgical outcome may be different from those of the operating surgeon. The 'hypospadias objective scoring evaluation' (HOSE) system was developed to assess outcome after hypospadias surgery, and provides an objective measure of outcome but does not assess parental satisfaction.

#### PATIENTS AND METHODS

Each of the parents of 82 children who had hypospadias repaired by one surgeon between 1996 and 2002 were sent questionnaires. Responses were converted to numerical values for statistical analysis. The operating surgeon (unaware of the parental responses) reviewed the case-notes and scored the outcome using a modification of the HOSE system.

#### RESULTS

Overall, 68 questionnaires were returned from 41 sets of parents, with 28 sets of parents completing both questionnaires independently. The mean parental satisfaction was 81% and the mean (range) modified HOSE score 11.7 (10–12); 94% of parents felt the outcome was as good as or better than they expected. In six (15%) cases, one or both of the parents felt they would not have allowed the surgery given the eventual

outcome. Interestingly, the satisfaction of mothers and fathers was similar. No correlation was detected between lower levels of satisfaction and lower modified HOSE score.

#### CONCLUSIONS

The overall surgical outcome and parental satisfaction in this series was high. However, despite a high modified HOSE score, some

parents were not satisfied. There needs to be greater education of parent before surgery about the outcome, and the HOSE system should be modified to take account of parental satisfaction rate.

037

### Mobilization of the urethra to correct chordee, and use of hypoplastic urethra in managing chordee with no hypospadias

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#### INTRODUCTION

Nesbit's procedure and the interpositional island pedicle flap/tube have been advocated for managing chordee with no hypospadias. Interpositional tube or flap procedures are associated with stricture, fistula and diverticula formation. The objective of this study was to use the hypoplastic urethra and corpus spongiosum to manage these cases.

#### PATIENTS AND METHODS

Fifteen patients with chordee but no hypospadias were managed from 1991 to 2002 (age range 2–17 years). Two of the patients had Nesbit's procedure and five an

inner preputial tube interposition after excision of the hypoplastic urethra. The remaining eight patients were treated by mobilization and use of hypoplastic urethra and corpus spongiosum. The chordee was corrected by mobilizing the urethra up to the bulbar part in these patients. The hypoplastic urethra was covered by corpus spongiosum and a pedicle flap after denuding the inner preputial skin.

#### RESULTS

None of the patients had fistula or residual chordee, and there was good cosmesis in those repaired by hypoplastic urethra and corpus spongiosum. Both patients treated by Nesbit's procedure had residual chordee and

one had a fistula repaired by skin tube interposition.

#### CONCLUSIONS

Mobilization of the whole urethra from the glans to the bulbourethral part gives an additional length of 2–3 cm, which is usually sufficient to cover the corporo-urethral disproportion. The theoretical concern of vascular compromise by mobilizing the whole urethra was unfounded in our cases. Mobilizing the urethra to correct chordee, using the hypoplastic urethra, corpus spongiosum and covering this with pedicle tissue, gives excellent results in chordee with no hypospadias.