Podium Session 3: General Topics
June 25, 2012, 1020-1120

POD-03.01

Laparoscopic Ureteric Clipping: a Simple Alternative in the Treatment of Ectopic Ureters Associated with a Non-functioning Upper Moiety

Romao, Rodrigo L.P.; Figueroa, Victor H.; Pippi Salle, Joao L.; Koyle, Martin; Bagli, Darius; Lorenzo, Armando
The Hospital for Sick Children, University of Toronto, Toronto, ON, Canada

Introduction and Objectives: Surgical management of symptomatic ectopic ureters associated with a non-functioning upper moiety (EU/NFxUM) is controversial. Both the upper (heminephrectomy) and lower pole (uretero-ureterostomy or reimplantation) approaches offer potential risk of damaging the ipsilateral lower pole functioning unit. Herein, we present a simplified novel approach for management of EU/NFxUM, laparoscopic ureteric clipping (LUC).

Methods: Prospectively collected data on 4 consecutive females that underwent LUC for ectopic ureters associated with incontinence between February and October 2011. Surgical technique consisted of cystoscopy and insertion of ureteral catheter in the lower pole ureter to aid in identifying and clipping the EU, which was achieved by standard trans-peritoneal supine laparoscopy.

Results: Mean age was 8.5 years (range 5-14). In all patients, diagnosis was based on clinical findings supported by ultrasound (US), magnetic resonance urography (MRU) and DMSA scans. Bilateral complete duplication was present in 2 patients. The combination of cystoscopy and laparoscopy allowed adequate identification of the ectopic ureter that was causing problems in both of them, followed by LUC. All patients in the series were dry immediately postoperatively and remain asymptomatic after a maximum follow-up of 6 months. They all have developed some degree of asymptomatic upper pole hydronephrosis on follow-up US.

Conclusions: Laparoscopic clipping holds promise as an alternative in the treatment of EU/NFxUM. Furthermore, in cases where diagnosis is not straightforward and imaging studies are inconclusive, combination of cystoscopy and diagnostic laparoscopy was reliable in identifying the EU that was causing problems. In this admittedly small series, all patients had complete resolution of incontinence without complications. Further follow-up is warranted to determine the fate of expected NFxUM hydronephrosis.

POD-03.02

The Association between Continence, Shunt, and Quality of Life in Spina Bifida

Olesen, Jamie; Kiddoo, Darcie; Metcalfe, Peter
University of Alberta, Edmonton, AB, Canada

Introduction and Objectives: Advances in the care of the Spina Bifida (SB) patient have resulted in markedly decreased mortality rates. Therefore, contemporary management must focus on quality of life (QOL), of which, the urinary tract is of primary importance. The main objective of this study is to look at urinary tract management, continence, and if the presence of a ventriculo-peritoneal (VP) shunt affects QOL.

Methods: After appropriate ethics approval we initiated a prospective study using multiple validated QOL instruments including: Health Related QOL-SB (HRQOL-SB), Ped's QOL 4.0, Incontinence Severity Index-Pediatrics (ISI-P), Pediatric Incontinence QOL (PinQ), and Hydrocephalus Outcome QOL (HOQ). Continence was strictly defined as <1 episode/week, and was determined via the questionnaire.

Results: The overall HRQOL-SB score for the entire sample population (n=40) was 86%, and continence rate was 35%. The presence of a VP shunt (n=14) did not affect continence or urinary specific QOL (ISI-P and PinQ). However, VP shunts were associated with lower overall QOL (Ped's QOL 4.0, $p<0.005$), however, this effect was negated with the HRQL-SB tool. When comparing continence rates between the VP shunt and no-VP shunt population, there were significant differences in PinQ ($p<0.005$ and $p<0.05$). Conversely, no significant differences were seen for HRQOL-SB or Peds QL 4.0. Furthermore, there were no differences seen within the VP shunt population when comparing scores on the HOQ when grouped according to continence.

Conclusions: This data suggests that overall SB specific QOL does not seem to be related to continence or a VP shunt. However, urinary specific QOL is dependent on continence and is influenced by a VP shunt. Although quality of life secondary to urinary symptoms is of paramount importance to this population, we must consider the multitude of other factors involved.

POD-03.03

Does Antibiotic Prophylaxis Prevent Urinary Tract Infections in Infants with Antenatally Detected Hydronephrosis? A Systematic Review and Meta-analysis

Braga, Luis[1]; Lorenzo, Armando[2]; Pemberton, Julia[1]; DeMaria, Jorge[1]; Kim, Soojin[1]; Milijovic, Hana[1]
[1]McMaster University, Hamilton, ON, Canada; [2]University of Toronto, Toronto, ON, Canada

Introduction and Objectives: Antibiotic prophylaxis (ATB) has been recommended empirically in newborns with antenatal hydronephrosis (ANH) in order to prevent urinary tract infection (UTI). There are currently no evidence based guidelines in place to support this practice. This systematic review evaluates whether antibiotic (ATB) prophylaxis reduces the rate of urinary tract infections (UTIs) in infants with antenatal hydronephrosis (ANH).

Methods: Four electronic databases and grey literature were searched from 1990-2010. Included studies where children <2 years with ANH receiving either prophylactic ATB or no treatment, number of patients who underwent voiding cystourethrogram was reported and UTI as an outcome. Full-text screening and quality appraisal was performed by 2 independent reviewers with disagreements settled by consensus. Meta-analysis was performed as appropriate, using a random effects model. Heterogeneity was assessed using forest plots and I^2 statistics.

Results: Our search yielded 1681 citations, 21 were included in the final analysis. Total number of infants was 3876. None were randomized control trials (RCTs). 62% of included studies were rated as low or moderate quality. Pooled rates of UTI in low-grade ANH group were similar regardless of ATB status: 2.2% on prophylaxis vs. 2.8% not on prophylaxis ($p=0.5$). In high-grade ANH group, patients on prophylaxis had a significantly lower UTI rate vs. those not on prophylaxis: 14.6% (95%CI 9.3-22.0) vs. 28.9% (95%CI:24.6-33.6), $p<0.01$. Number Needed to Treat (NNT) was 8. 16% of patients had vesico-ureteral reflux (VUR) in the low-grade AHN group compared to 5% in high-grade group. I^2 statistics showed high heterogeneity (85%).

Conclusions: This systematic review suggests that offering ATB prophylaxis to 8 infants with high-grade ANH would prevent 1 UTI, supporting prophylaxis in this sub-group. Presence of VUR does not appear to affect UTI rates. Level of evidence in included studies was low, calling for a RCT.

© 2012 Canadian Urological Association

POD-03.04

Role of a Novel Internet Mediated Feedback Instrument in a New Age of Simulation Training: a Randomized Control Study

Weber, Bryce[1]; Bagli, Darius[2]; Carnahan, Heather[3]; Gualdron, David Rojas[4]; Cheung, Jeffrey[4]; Dubrowski, Adam[3]
[1]Alberta Children's Hospital, Calgary, AB, Canada; [2]Hospital for Sick Children, Toronto, ON, Canada; [3]Wilson Centre, Toronto, ON, Canada; [4]Sick Kids Learning Institute, Toronto, ON, Canada

Introduction and Objectives: Simulation for the acquisition of surgical skills is expensive, requires considerable faculty time commitment, and is subject to scheduling conflicts. To circumvent these constraints we investigated the effectiveness of Computer-Based Video Training (CBVT) supported by a novel Internet Mediated Feedback Assessment (IMFA) model.
Methods: This was a 3-arm, randomized transfer design study. Medical students (64) learned knot tying and suturing via a CBVT module. After the 30-minute CBVT based practice all participants performed a pre-test trial consisting of unsupervised knot tying and suturing. The pre-test trial was videotaped and uploaded to a secure server via Observational Practice and Educational Networking (OPEN) Internet site. Participants were randomly assigned to one of the three experimental groups: Control, IMFA-Peer Feedback, or IMFA-Peer and Expert Feedback. All performed a 2-week retention test.
Results: Validated global rating scales showed no significant differences at the initial pre-test between on either the knot tying (p=0.9) or suturing (p=0.8) tasks. Participants in the IMFA-Peer and Expert Feedback group retained more skills than participants in the Control, or IMFA-Peer Feedback groups (suturing, p=0.001; knot tying, p=0.001).
Conclusions: This novel combination of CBVT with Internet supported feedback from peers and experts is the first study to show that teaching surgical tasks over the Internet maybe sub-optimal. This study shows that personalizing practice schedules in accordance with key principles of self-directed learning needs to be supplemented with an expert feedback in order for surgical skills to be optimally retained in the community of learners.

POD-03.05

Solitary Solid Renal Mass: Can We Predict Malignancy?

Violette, Philippe[1]; Abourbih, Samuel[1]; Szymanski, Konrad M.[1]; Tanguay, Simon[1]; Aprikian, Armen[1]; Matthews, Keith[1]; Brimo, Fadi[2]; Kassouf, Wassim[1]
[1]Division of Urology, McGill University Health Centre, Montreal, QC, Canada; [2]Division of Pathology, McGill University Health Centre, Montreal, QC, Canada

Introduction and Objectives: With increased use of imaging, more solid renal masses are found incidentally. Current practice indicates that these masses can be removed without tissue diagnosis. This may lead to increased number of unnecessary surgeries, and associated morbidity. The goal of our study is to determine clinical predictors of benign disease.
Methods: Pathology reports of patients who underwent radical or partial nephrectomy at 2 hospitals from 1998-2008 were reviewed. Only patients with solitary solid unilateral renal masses were included. Predictors of malignancy risk were assessed with univariate and multivariate logistic regression.
Results: 592 patients with a mean age of 60 ± 13 years were included, 38% of whom were women. Radical and partial nephrectomy was performed in 66% and 34% of patients, respectively. Renal masses were equally distributed on right and left sides (49% vs. 51%, p=0.84). Masses were more commonly located in upper and lower poles compared to mid pole (40.8% vs. 38.7% vs. 20.5%, respectively). Mean tumor size was larger in patients who underwent radical compared to partial nephrectomy (6.8 cm vs. 2.9 cm, p<0.001). The rate of benign disease in our overall population was 9.5%. On univariate and multivariate analysis, only renal mass size less than 2 cm and female gender were predictive of benign disease. On further analysis the magnitude of this effect was found to be additive.
Conclusions: Renal masses smaller than 2 cm and female gender were associated with higher probability of benign disease. Patient age and tumor location were not predictive of benign disease.

POD-03.06

A Prospective Randomized Trial of Povidone-iodine Prophylactic Cleansing of the Rectum prior to Transrectal Ultrasound-guided Prostate Biopsy

Abughosh, Zeid[1]; Margolick, Joseph[1]; Goldenberg, Larry[1]; Afshar, Kourosh[1]; Taylor, Stephen[1]; Gleave, Martin[1]; Bowie, William[2]; Roscoe, Diane[1]; Machan, Lindsay[1]; Black, Peter[1]
[1]Vancouver Prostate Centre, Vancouver, BC, Canada; [2]University of British Columbia, Vancouver, BC, Canada

Introduction and Objectives: Infectious complications (IC) after transrectal ultrasound-guided prostate biopsy (TRUSBx) include bladder and prostate infections in 3-11% and sepsis in 0.1-5% of patients. This trial investigated the safety and efficacy of Povidone-iodine prophylactic cleansing of the rectum prior to TRUSBx on the rate of IC.
Methods: 1069 men were invited to participate in this trial, of whom 865 met criteria and were randomized prospectively to undergo TRUSBx with (n=421, "treatment") or without (n=444, "control") rectal cleansing. All patients delivered urine and rectal swab cultures prior to TRUSBx and received a 3 day course of ciprofloxacin prophylaxis. Patients measured their temperature for 48 hours after TRUSBx, delivered a urine culture after 48 hours, and completed a telephone interview after 7 days. The primary endpoint was the rate of IC, a composite endpoint consisting of: 1. fever >38.0°C, 2. urinary tract infection (UTI), or, 3. sepsis (standardized definition). Chi- square (X2) significance testing was performed for differences between groups, and a multivariate analysis was performed to assess risk factors for IC.
Results: IC was observed in 11 (2.6%) treated and 20 (4.5%) control patients (p=0.15). Sepsis was observed in 1.0% of treated and 1.6% control patients (p=0.55). Rectal swab cultures revealed ciprofloxacin resistance in 20% of patients, of whom 3.5% developed IC. On multivariate analysis, resistance to ciprofloxacin in the rectal swab culture (p<0.001) and a history of taking ciprofloxacin in the three months preceding TRUSBx (p=0.009) predicted IC. No significant adverse effects to rectal cleansing were observed.
Conclusions: Rectal cleansing with iodine prior to TRUSBx was safe but the 42% relative risk reduction of infections was not statistically significant. Ciprofloxacin-resistant flora were found frequently, but only a small fraction of these patients developed an infectious complication.