Sessions scientifiques VII, VIII, IX, X, XI
Samedi (a.m.), le 10 novembre 2012

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Session scientifique VII

Objectifs éducatifs : À la fin de cette session, le participant connaîtra les nouveaux développements en recherche clinique et fondamentale. Il pourra apprécier les travaux de recherche des résidents et fellows en urologie.

7 h 00 - 8 h 00
Déjeuner causerie
Salon Jacques-Cartier
Prise en charge de cas complexes du cancer de la prostate
Conférenciers : Wassim Kassouf, Fred Saad, Eric Vigneault
Modérateur : Michel Carmel

Session scientifique VIII

Objectifs éducatifs : À la fin de cette session, le participant connaîtra les nouveaux développements en recherche clinique et fondamentale. Il pourra apprécier les travaux de recherche des résidents et fellows en urologie.
Modérateurs : Jean-Luc Descotes et Steven P. Lapointe

8 h 30 - 8 h 39
Comparative study for the carbonic anhydrase-IX, vascular endothelial growth factor and platelet derived growth factor receptor-alpha immunohitochemicale
Mohamed Bishr; Cécile Le Page; Philippe O. Gannon; Véronique Barrès; Roula Albadine; Fred Saad; Jean-Baptiste Lattouf
Centre de recherche du Centre hospitalier de l'Université de Montréal (CRCHUM) and Institut du cancer de Montréal, Centre hospitalier de l'Université de Montréal (CHUM)
Introduction: Approximately 60% of sporadic clear cell renal cell carcinoma (ccRCC) cases harbor a mutated VHL gene. VHL gene is involved in the regulation of the hypoxia induced factor1-α (HIF1–α). Dysregulation of this pathway results in high expression of carbonic anhydrase-IX (CA-IX), vascular endothelial growth factor (VEGF) and platelet derived growth factor receptor (PDGFR-α) among other target proteins. Our objectives were to compare the patterns of immunohistochemical (IHC) expression of CA-IX, VEGF and PDGFR-α in RCC and evaluate their relation to the different clinicopathological variables.
Methods: Clinical data was obtained from 50 patients with RCC who underwent either radical or partial nephrectomy in the Centre hospitalier de l'Université de Montréal (CHUM). A tissue microarray containing 150 cores (1 normal and 2 cancerous cores per patient) was constructed. The specificity of the antibodies used in this study was validated by Western blot. A pathologist scored the distribution and the intensity of the IHC staining for each biomarker.
Results: IHC staining for VEGF and PDGFR-α was cytoplasmic and membranous for CA-IX. We noted a statistically significant difference in the IHC expression of CA-IX, VEGF and PDGFR-α between normal kidney tissue and RCC ($p<0.001$), while between ccRCC and papillary RCC, only CA-IX and PDGFR-α showed significant difference ($p<0.001$). In the ccRCC group, an inverse correlation was observed between the percentage of cells showing positive CA-IX staining and the intensity of VEGF staining ($p=0.014$). Statistically significant correlations were observed between CA-IX expression and the Fuhrman nuclear grade, tumor size and surgical margins ($p=0.049$, $p=0.001$, $p=0.033$ respectively) and between VEGF and Fuhrman nuclear grade, T stage and stage group ($p=0.025$, $p=0.012$, $p=0.006$ respectively).
Conclusion: In ccRCC, the IHC expression of CA-IX and VEGF are more correlated to the clinicopathological variables than PDGFR-α. Combining these biomarkers together could improve their correlation with clinical parameters and their potential prognostic ability.

8 h 39 - 8 h 48
Holmium laser enucleation of the prostate (HoLEP) for glands larger than 200 grams
Naeem Bhojani; Jessica A. Mandeville; James E. Lingeman
Indiana University School of Medicine
Introduction: Holmium laser technology allows for enucleation of very large prostate glands with outcomes equivalent to or superior to those of open simple prostatectomy. Here we describe our experience with HoLEP for glands ≥200 grams.
Methods: Between January 1999 and February 2011, 58 patients with glands ≥200 grams underwent HoLEP at our institution. All procedures were performed by one surgeon (JEL). Residents and/or fellows assisted in all cases.
Results: Mean patient age was 72.6 years. Mean pre-operative patient characteristics include transrectal ultrasound (TRUS) volume of 218 grams, AUA symptom score (AUASS) of 18.9, Qmax of 7.5 ml/sec, post-void residual (PVR) of 237.6 cc and PSA of 19.9 ng/mL. Twenty-nine percent (17/58) of patients required catheterization (intermittent catheterization or indwelling catheter) pre-operatively. Mean enucleation and morcellation times were 86.7 min (range 30-211 min) and 49.3 min (range 23-133 min) respectively. Mean enucleation and morcellation efficiency were 2.8 g/min and 6.3 g/min. Mean weight of tissue resected was 213.4 grams (range 111.1 – 532.2 grams). Two patients (3.4%) required perineal urethrostomy in order to complete the procedure. Eight patients (13.8%) had concomitant procedures (bladder neck incision (2), cystolithopaxy (5), bladder biopsy (1)). One patient (1.7%) required cystotomy for tissue retrieval. One patient required same-day take back for clot evacuation and one patient required take back 48 hours post-operatively to complete morcellation. Mean pre- and post-

operative hemoglobin were 14.1 g/dL and 11.5 g/dL, respectively. Two patients (3.4%) required transfusion (mean 4 units). Mean catheterization time was 19.9 hours (range 8-96 hours) and all patients voided spontaneously after catheter removal. Mean AUASS at 12 months was 3.86 and mean PVR at 12 months was 34.9 cc. Mean PSA at 6 months was 0.85 ng/ml (mean reduction 87.4%). To date, one patient (1.7%) has developed a urethral stricture and 0 patients have required secondary procedures.
Conclusion: HoLEP can be safely performed in patients with glands ≥200 grams. In experienced hands, results equivalent to or superior to open simple prostatectomy can be expected.

8 h 48 - 8 h 57
Effect of needle size on cancer detection, pain, bleeding and infection in TRUS-guided prostate biopsies: A prospective trial

Orchid Djahangirian; Michael McCormack; Alain Duclos; Mathieu Latour; Daniel Liberman; Luc Valiquette; Kevin Zorn
University of Montreal Health Centre

Introduction: Transrectal ultrasound (TRUS)-guided prostate biopsies using 18G calibre needles are widely used; most often 12-core tissue samples of the peripheral zone are obtained. Although the diagnostic yield of prostate biopsies is fair, there is still a potential for false negative results, which necessitates repeat biopsies. In an effort to improve the accuracy of prostate biopsies, different sampling schemes have been developed. One strategy has been to increase the number of core biopsies performed on each patient. Another strategy has been to improve the reliability of prostate biopsies using larger calibre needles, thereby increasing the amount of tissue obtained for each core biopsy.
Methods: After approval by our institutional review board, we prospectively compared two biopsy needle sizes (18G vs. 16G) in relation to prostate cancer diagnosis, pain, bleeding and infection rates on 105 patients. Each patient underwent 6 TRUS-guided prostate biopsies with the standard 18G needle and 6 other biopsies with the experimental 16G needle. To evaluate possible complications related to the use of a larger 16G needle in the experimental group, we compared pain, bleeding and infection rates with a control group of 100 patients who underwent 12 biopsies with a single 18G needle (18G group). Pain, bleeding assessment and infection events were evaluated using patient questionnaires and telephone interviews.
Results: TRUS-guided prostate biopsies using 16G calibre needles did not increase cancer detection or non-malignant pathology rate, including prostatic intraepithelial neoplasia (PIN) and atypical small acinar proliferation (ASAP). Pain, bleeding and infectious complications were similar in both groups. Infection was defined as temperature above 38°C occurring within 48 hours after the procedure. We identified 4 patients with post-biopsy fever in the experimental (16/18G) group and 4 other patients in the (18G) control group. The post-biopsy infection rate is higher than reported just a few years ago and indicates that quinolone resistant Escherichia coli seems to be more prevalent in our urban setting than previously suspected. Limitations to our study include small group numbers.
Conclusion: Larger 16G needles appear to be safe for TRUS-guided prostate biopsies. Further study in a larger, multi-institutional, prospective, randomized manner with 16G needles is warranted to assess the theoretical benefit of larger core biopsies in prostate cancer detection.

8 h 57 - 9 h 06
Long-term results of a prospective open-label study: Double anticholinergic therapy for refractory hyperreflexic bladder in children

Genevieve Nadeau; Annette Schroder; Katherine Moore; Lucie Genois; Eve Pellerin; Stephane Bolduc
Division de l'Urologie, Centre Hospitalier Universitaire de Québec (CHUQ), Université Laval

Introduction: When facing hyperreflexic bladder, refractory to conventional medical approach, the therapeutic invasive alternatives are to proceed with augmentation cystoplasty or more recently, botulinum toxin detrusor injections. Therefore, we aimed at optimising medical therapy in a select group of children who failed a single agent anticholinergic therapy, by simultaneously using two anticholinergic medications (oxybutinin 10-30 mg and/or tolterodine 4 mg and/or solifenacin 5-10 mg); thus evaluating: efficacy, tolerability and safety of this approach.
Methods: Paediatric patients presenting refractory hyperreflexic bladders with incontinence were offered to enter a prospective open-label protocol using adjusted-dose regimens. Inclusion criteria were: intensive medical and behavioural therapies have failed to improve symptoms, absence of correctable neurological anomalies (MRI) and initially on optimal dose of one well-tolerated extended release anticholinergic medicine with clinical and urodynamic (UDS) partial responses. The follow-up consisted of voiding diaries and post-void residuals every 3 months, ultrasound and UDS every 6 to 12 months and yearly VCUG. Families were regularly asked for compliance, side effects, change in behaviour at home and school, continence status and overall quality of life. Blood samples and EKG were also obtained to detect potential toxicity. The primary endpoint was efficacy toward continence; the secondary end-points were tolerability and safety. Medication used was oxybutinin 10-30 mg and/or tolterodine 4 mg and/or solifenacin 5-10 mg.
Results: Fifty-five patients (21 girls, 34 boys) were enrolled. Thirty patients with overactive bladder (OAB) and 25 with neurogenic bladder (NDO) were followed for a minimum of 6 months. Mean age at initiation was 10±3 and 13±3 years and they were on double medication for a mean of 27 and 45 months for OAB and NDO respectively. Urodynamic capacity for OAB patients improved from 118±38 ml to 317±103 ml and uninhibited contractions decreased from 86±16 to 21±22 cmH2O. For NDO patients, urodynamic capacity improved from 209±103 ml to 419±172 ml and uninhibited contractions decreased from 64±26 to 22±18 cmH2O. Continence improved every OAB patients (13 dry, 8 significantly and 9 moderately improved) and every NDO patients (10, 7, 8). Of the NDO patients, 1 underwent bladder augmentation and 8 botulinum toxin detrusor injections. Twenty-eight reported no side effects, 18 mild and 9 moderate. Of the 34 patients voiding, 8 developed post-void residuals (>20 ml). Blood tests and EKG remained normal.
Conclusion: In the presence of refractory overactive bladder in children, a double anticholinergic therapy is an efficient and serious alternative to surgical treatment. Patients and family were very satisfied with this non-surgical and innovative approach.

9 h 06 - 9 h 15
Tolerability of rigid cystoscopy botulinum neurotoxin A injections in the lower urinary tract

Oussama El Yazami Adli; Romain Caremel; Waly Mahfouz; Oleg Loutochin; Jacques Corco
Jewish General Hospital, McGill University

Introduction: BONT-A injection in the lower urinary tract is a recommended therapeutic approach for patients with detrusor overactivity refractory to current antimuscarinic agents. It is also under evaluation for intractable overactive bladder and detrusor-extrernal sphincter dyssynergia as an alternative to more invasive options. This procedure can be performed either using a rigid or a flexible cystoscope. We aim to evaluate the tolerance of rigid cystoscopy injections in the bladder and the external urethral sphincter using a validated pain score.
Methods: This is a prospective study conducted between February 2011 and May 2012. For each injection, the patient's informations were recorded and a protocol of local anesthesia was applied when pertinent. Tolerability was assessed using a visual analogic scale (VAS).
Results: 64 injections were performed in women and 42 in men. The injections were performed in patients with neurogenic detrusor overactivity, overactive bladder and detrusor-external sphincter dyssynergia (62%, 30% and 8% of the patients respectively). In 22 injections (20.7%), the patients had no bladder sensation and therefore received no local anesthesia. The other patients received intravesical lidocaine 2% instillation before injection in the detrusor and intraurethral lidocaine 2% jelly before external urethral sphincter injection. The mean pain score in females was 2.29 (range 0-10) and 3 in men (range 0-8). 68.8% of the patients had a pain score of 2 or less and 5.6% had a pain score of more than 6. No patient requested sedation before any subsequent injections.
Conclusion: BONT-A injection using a rigid cystoscope and local anesthesia is safe and well tolerated in both men and women to perform in an office setting.

9 h 15 - 9 h 24
Evaluation of the safety of botulinum toxin-A injection in the bladder and the external urethral sphincter
Oussama El Yazami Adli; Romain Caremel; Waly Mahfouz; Oleg Loutochin; Jacques Corcos
Jewish General Hospital, McGill University, Montreal, Quebec
Introduction: Botulinum neurotoxin A (BONT-A) injection in the bladder or the external urethral sphincter (EUS) is a recognized approach for the treatment of intractable lower urinary tract symptoms related to detrusor overactivity (DO) or destrusor external sphincter dyssynergia (DESD). Few prospective studies specifically addressed the safety of these procedures.
Methods: Patients undergoing BONT-A injection in the bladder or the EUS were investigated in a prospective manner between February 2011 and May 2012. After each injection, evaluation was performed at 2 weeks and 2 months using phone and mailed questionnaires. Recorded parameters were the presence of pain, hematuria, urinary tract infection, voiding difficulties and systemic effects believed to be related to BONT-A injection.
Results: 106 injections were performed in 45 women (mean age 62.3 years) and 18 men (mean age 53.6 years). Neurogenic detrusor overactivity was the main indication for BONT-A injection (62%). 76 questionnaires have been adequately filled. The most common reported adverse effects were mild hematuria (18.6%) the day of the procedure, urinary tract infection (6.5%) and voiding dificulties (6.5%). No patient reported urinary retention. Transient fatigue or benign muscle weakness was reported in 6.5% and no serious systemic effect was recorded.
Conclusion: In patients with refractory DO or DESD who do not want or are unfit for invasive reconstructive surgery, BONT-A injections induce an acceptable morbidity.

9 h 24 - 9 h 33
Post-nephrectomy fever: Should we care?
Melanie Morris; Tomy Brousseau; Diego Barriers; Anne-Marie Houle; Julie-Franc Guimond
CHUS-Sainte-Justine
Introduction: Although nephrectomies and partial nephrectomies in children are procedures with a low rate of complications, one of the possible sequelae includes post-operative fever. Febrile episodes post nephrectomy can induce septic workups with moderately invasive investigations. They tend to cause concern in both the medical team and the family. We sought to determine if there is a difference in the rate of febrile episodes in the post-operative interval in nephrectomy versus hemi nephrectomy and if it is necessary to investigate all febrile episodes in the post-operative period.
Method: A retrospective review was performed of patients undergoing nephrectomy for benign renal disease between 2000 and 2012. Patients with malignant disease were excluded. Demographic data was assessed and outcomes evaluated included maximal temperatures in the first and second post-operative day (POD), and post-operative complications. Fever was defined as a maximal temperature of greater than 38 degrees.
Results: A total of 64 patients underwent total nephrectomy and 30 patients underwent partial nephrectomy for benign pathologies at our institution in the 10-year period. The median age at surgery was 21.4 (0.3-209.1) months and 45 (70%) were male and 19 (0%) were female. In the group of total nephrectomy, 16% (10) and 27% (17) had a febrile episode in the first and second POD respectively. In the heminephrectomy group 17% (5) and 50% (15) had a fever in POD 1 and 2 respectively. Furthermore when we divided the total nephrectomy group between open and retroperitoneoscopic groups we noted that 2% and 4% of the open group had fever post operatively in day 1 and 2 respectively versus the minimally invasive group, which had 14% and 22% febrile episodes respectively. There were no serious sequelae from any procedure or major infections demonstrated by investigations.
Conclusion: Interestingly both groups had a larger number of febrile episodes on the second post-operative day, and in the partial nephrectomy group the fraction was much greater. In addition the minimally invasive group had more febrile episodes than the open group for total nephrectomy. However, considering there were no serious complications resulting from these febrile episodes, one can conclude that observation may suffice. It is notable that a much larger group of patients undergoing a heminephrectomy have a post-operative fever on the second post-operative day. It can be postulated that the resected margin may release inflammatory markers that would lead to fever. Further, larger trials could further delineate this.

Session scientifique IX

Objectifs éducatifs : Comprendre le rationnel du traitement focal du cancer de prostate dans les dimensions suivantes :
1. histoire naturelle du cancer de prostate et notion de tumeur index;
2. place du traitement focal entre surveillance active et traitements actuels du cancer localisé;
3. conditions indispensables à la réalisation d'un traitement focal : sélection de patient, determination d'une cible à traiter;
4. différentes options de thérapies focales;
5. experiences cliniques actuelles, etudes en cours et à venir;
6. questions soulevées par le traitement focal du cancer de prostate : suivi, re-traitements.

9 h 33 - 9 h 50
Futur du traitement focal du cancer de la prostate
Conférencier : Franck Bladou
Urologue
Modérateur : Frederic Pouliot

Session scientifique X
Objectifs éducatifs :
1. Décrire les différents types de curiethérapie disponibles pour le traitement des cancers de la prostate.
2. Discutez des indications et des contre indications de la curiethérapie prostatique.
3. Discutez les avantages et le controle tumoral rélie à l'utilisation de la curiethérapie prostatique.
4. Décrire les toxicités reliées à la curiethérapie prostatique et les principes généraux de prise en charge.

10 h 00 - 10 h 30
Mise à jour sur la curiethérapie de la prostate
Conférencier : Eric Vigneault
Radio-oncologue, HUQ Pavillon Hopital Hotel-Dieu
Modérateur : Wassim Kassouf

Session scientifique XI

Objectifs éducatifs : À la fin de cette session, les participants verront les avancées dans l'approche des symptomes urinaires bas après la prostatectomie radicale. Ils pourront mieux comprendre la maniere d'investiguer ces problèmes qui affectent la qualité de vie des patients et mieux connaitre les traitements possibles.

11 h 15 - 11 h 45
Prise en charge de l'incontinence urinaire post-prostatectomie
Conférencier : Francois Haab
Hopital Tenon, Paris, France
Modérateur : Jacques Corcos