JOURNAL OF ENDOUROLOGY
Volume 28, Supplement 1, September 2014

DOI: 10.1089/end.2014.3500

SCIENTIFIC PROGRAM OF 32ND WORLD CONGRESS OF ENDOUROLOGY & SWL PROGRAM BOOK

Thursday, September 4 **Moderated Poster Session (MP01)** **01:30 pm–03:30 pm**

Basic Research 1
Room: RM 101 A
Moderator: *Xin Gao, Mark Katz, Chaidir Mochtar*

*Underlined name denotes the presenter.

MP01-01 METABOLIC SHIFT AND MTDNA COPY NUMBER CHANGE IN HUMAN RENAL CELL CARCINOMA
Chen-Sung Lin[1,3], Siao-Cian Pan[2], Yau-Huei Wei[2,5], Allen Wen-Hsiang Chiu[1,4]
[1]Faculty of Medicine, National Yang-Ming University (Taiwan)
[2]Institute of Biochemistry and Molecular Biology, National Yang-Ming University (Taiwan)
[3]Division of Thoracic Surgery, Department of Surgery, Taipei Hospital, Ministry of Health and Welfare (Taiwan)
[4]Department of Urology, Taipei Veterans General Hospital (Taiwan)
[5]Department of Medicine, Mackay Medical College (Taiwan)

MP01-02 TREATMENT OF RENAL CELL CARCINOMA WITH A NOVEL NANOPARTICLE: INITIAL IN VITRO RESULTS
Cameron Callaghan[1], Michael Maddox[1], Donna Peralta[2], James Liu[1], Sree Harsha Mandava[1], Matthew Tarr[2], Benjamin Lee[1]
[1]Tulane University School of Medicine (United States)
[2]University of New Orleans (United States)

MP01-03 EVALUATION OF SORAFENIB-LOADED PLGA NANOPARTICLES IN THE TREATMENT OF RENAL CELL CARCINOMA
James Liu[1], Sree Harsha Mandava[1], Benjawan Boonkaew[2], Michael Maddox[1], Srinivas Chava[3], Cameron Callaghan[1], Srikanta Dash[3], Vijay John[2], Benjamin Lee[1]
[1]Tulane University School of Medicine Department of Urology (United States)
[2]Tulane University Department of Chemical & Biomolecular Engineering (United States)
[3]Tulane University School of Medicine Department of Pathology (United States)

MP01-04 TWO-PART SILICONE MOLD. A NEW TOOL FOR FLEXIBLE URETEROSCOPY SURGICAL TRAINING
Bruno Marroig[1], Luciano Alves Favorito[1], Marco Antônio Fortes[1], Marco A. Pereira-Sampaio[1], Francisco J.B. Sampaio[1]
[1]State University of Rio de Janeiro (Brazil)

MP01-05 A HIGH-THROUGHPUT MINIMALLY-INVASIVE, ULTRASOUND-GUIDED MODEL FOR THE STUDY OF CATHETER ASSOCIATED URINARY TRACT INFECTIONS AND DEVICE ENCRUSTATION IN MICE
Claudia Janssen[1], Joey Lo[1], Wolfgang Jäger[2], Igor Moskalev[2], Adrienne Law[1], Ben H. Chew[1], Dirk Lange[1]
[1]The Stone Centre at VGH, Department of Urologic Sciences, University of British Columbia (Canada)
[2]Vancouver Prostate Centre, Department of Urologic Sciences, University of British Columbia (Canada)

MP01-06 EVALUATION OF THE TENSILE STRENGTH OF THE HUMAN URETER - PRELIMINARY RESULTS
Yaniv Shilo[1], Joseph E. Pichamuthu[2,3], John C. Lynam[1], Timothy D. Averch[1], David A. Vorp[2,3]
[1]University of Pittsburgh Medical Center (United States)
[2]McGowan Institute for Regenerative Medicine (United States)
[3]Department of Bioengineering, University of Pittsburgh (United States)

MP01-07 INCIDENCE, CLINICAL CHARACTERISTICS, AND MAJOR LIFESTYLE FACTORS ASSOCIATED WITH UPPER TRACT UROTHELIAL CARCINOMA IN TWO PROSPECTIVELY FOLLOWED COHORTS OF MEN AND WOMEN.
Jed-Sian Cheng[1], Seth Bechis[1], Mark Preston[1], Kathryn Wilson[2], Glen Barrisford[1], Alex Sanchez[1], Dayron Rodriguez[1], Adam Feldman[1], Meir Stampfer[2], Eunyoung Cho[3]
[1]Massachusetts General Hospital (United States)
[2]Harvard School of Public Health (United States)
[3]Brigham and Women's Hospital (United States)

MP01-08 REFERRED PAIN IN KIDNEY STONE DISEASE: SENSORY AND TROPHIC CHANGES
Palle Jörn Sloth Osther[1], Katja Venborg Pedersen[1], Asbjoern Mohr Drewes[2,3], Ole Graumann[1], Susanne Sloth Osther[1], Anne Estrup Olesen[2], Lars Arendt-Nielsen[3]
[1]Urological Research center, Lillebaelt Hospital, University of Southern Denmark (Denmark)

However we don't reach a broad consensus on surgical adaptation of laparoscopic adrenalectomy (LA) for elderly PA patients.
METHODS: To understand surgical advantage for elderly PA patients, we evaluated safety and effectiveness between 70 years and older PA patients and younger PA patients those who went through LA in our hospital from January 2007 to December 2013.
RESULTS: 429 LA were performed during this period, 17 patients (13 men and 4 women) aged 72 years old (70–77) for a median age have high blood pressure for 20.8 years with a median length. The median of BMI and Charlson comorbidity index was 25.3 and 1 respectively. There were not any significant differences between elderly and younger about operation time, blood loss, hospital stay and surgical complications analyzed with Clavien classification. In all patients serum aldosterone significantly decreased after LA and in 16 patients antihypertensive agents became decreasing in 35 months for a mean observation period.
CONCLUSIONS: It is necessary to compare prognosis with elderly PA patients undergoing only a medical therapy, LA was safe and effective for the treatment of elderly PA patients suffering from high blood pressure for long time.
SOURCE OF FUNDING: None

MP26-29 TRANSVAGINAL NATURAL ORIFICE TRANSLUMENAL ENDOSCOPIC SURGERY (NOTES) IN UROLOGY: ONE SINGLE CENTRE EXPERIENCE

Xiaofeng Zou[1], Guoxi Zhang[1], Yuanhu Yuan[1], Rihai Xiao[1], Gengqing Wu[1]

[1]*First Affiliated Hospital of Gannan Medical University (China)*

INTRODUCTION AND OBJECTIVES: We aimed to describe our experience with the transvaginal NOTES in female patients, and to evaluate its feasibility, safety and efficacy.
METHODS: 172 female patients with a mean age of 36.3 years and a median body mass index of 26.2 kg/m2, were subjected to transvaginal NOTES. In transvaginal NOTES-assisted laparoscopic procedures, a 5-mm trocar and a 10-mm trocar were inserted in the umbilical edge. A 5-mm or 10-mm trocar was inserted in the posterior vaginal fornix for a 5-mm flexible-tip 0° or 10-mm 30° laparoscope. In pure transvaginal NOTES procedures, a 30-mm incision was made at the posterior vaginal fornix, and a 5 mm trocar was introduced into the pelvic cavity. A 5-mm flexible-tip 0° laparoscope was inserted into the pelvic cavity. A Zou-Port was introduced at the posterior vaginal fornix. Dissection was performed according to the method of the standard laparoscopy. The intact specimen was extracted transvaginally.
RESULTS: Transvaginal NOTES was successfully completed in 172 patients, included 21 adrenalectomy, 124 nephrectomy, 4 nephroureterectomy, 1 nephron sparing surgery, and 1 hemine-phroureterctomy. Pure transvaginal NOTES procedures performed included 5 renal cyst excision, 16 nephrectomy, The mean operative time was 123, 116, 183, 188, and 87 minutes, and blood loss was 162, 94, 137, 175, and 26 ml for NOTES-assisted nephrectomy, adrenalectomy, nephroureterectomy, pure NOTES nephrectomy, pure NOTES renal cyst excision.
CONCLUSIONS: Transvaginal NOTES is feasible, safe and effective. It provides a good cosmetic outcome. However, existing instruments need improving for the development of transvaginal NOTES.
SOURCE OF FUNDING: None

MP27 ENDOUROLOGY: EDUCATION

MP27-01 MULTI INSTITUTIONAL EXPERIENCE WITH THE GREEN LIGHT SIMULATOR

Bilal Chughtai[1], Art Sedrakyan[1], Abby Isaacs[1], Claire Dunphy[1], Matthew Rutman[2], Alexis Te[1]

[1]*Weill Medical College of Cornell University (United States)*
[2]*Columbia University Medical Center (United States)*

INTRODUCTION AND OBJECTIVES: The GreenLight Simulator is designed to emulate the experience the intraoperative experience of photoselective vaporization of the prostate. The GreenLight Simulator was developed through University of Minnesota's Center for Research and Education in Simulation Technologies and American Medical Systems®. We sought to evaluate the simulator to teach safe practices during this procedure.
METHODS: We developed a structured curriculum to evaluate the GreenLight simulator's ability to teach safety principles to medical students, residents, and several faculty members. Over 3 months, 20 residents completed several modules and repeated the modules 3 times. Global scores, sweep speed, average laser distance, and ability to coagulate bleeders were recorded. Statistical analysis was performed with SAS v9.3 (SAS Institute Inc., Cary, NC). This was done with a random effects model adjusting for repeated measures across resident experience.
RESULTS: There were 331 trials completed on the GreenLight Simulator. There was no significant difference between sweep speed, blood loss, and average laser distance between clinical years. There was an increase in more efficient vaporization with increased clinical experience. This was also seen with increased usage of the simulator. Again, there was no correlation between sweep speed, blood loss, and average laser distance with increased usage, although users became more efficient at vaporization.
CONCLUSIONS: More clinical experience correlated with more efficient vaporization, but did not correlate with sweep speed or laser distance. The GreenLight simulator was a useful tool in teaching important safety elements of the PVP procedure.
SOURCE OF FUNDING: None

MP27-02 CROWD-SOURCED ASSESSMENT OF TECHNICAL SKILLS (C-SATS): VALIDATION THROUGH THE BASIC LAPAROSCOPIC UROLOGIC SURGERY (BLUS) CURRICULUM

Thomas Lendvay[1], Bryan Comstock[1], Timothy Averch[2], Geoffrey Box Bodo Knudsen[3], Timothy Brand[4], Michael Fernandino[5], Jihad Kaouk[6], Jaime Landman[7], Benjamin Lee[9], Elspeth McDougall[9], Ashleigh Menhadji[8], Bradley Schwartz[10], Robert Sweet Timothy Kowalewski[11]

[1]Unviersity of Washington (United States)
[2]University of Pittsburgh (United States)
[3]Ohio State University (United States)
[4]Madigan Army Medical Center (United States)
[5]Duke University (United States)
[6]Cleveland Clinic Foundation (United States)
[7]University of California, Irvine (United States)
[8]Tulane University (United States)
[9]University of British Columbia (Canada)
[10]Southern Illinois University (United States)
[11]University of Minnesota (United States)

INTRODUCTION AND OBJECTIVES: Crowdsourcing is the practice of obtaining services from a large group of people; typically from an online community such as the Amazon.com Mechanical Turk Project. We hypothesized that the 'crowd' could score performances comparably to scores derived from expert surgeons of dry lab laparoscopic skill tasks videotaped during the AUA BLUS curriculum validation project.
METHODS: 24 candidate videos of laparoscopic skill tasks performed by surgeons of varying levels of laparoscopic case experience - 12 suturing and 12 pegboard transfer performances were evaluated by 5 faculty experts and at least 60 Amazon.com Mechanical Turk crowd-workers. Each rater provided responses to the same multi-domained rating scale from the Global Objective Assessment of Laparoscopic Skills (GOALS) tool. We compared mean global performance scores provided by experts and crowd-workers using Cronbach's alpha and estimated performance-specific passing probabilities by cut-offs established with receiver operating characteristic (ROC) curves.
RESULTS: Within 48 hours we received 1,840 crowd-worker ratings, of which 1,438(78.2%) passed analysis eligibility criteria based on discrimination questions used to assess the integrity of the scorer's responses. Faculty experts completed the reviews in 10 days. Inter-rater reliability was excellent ($\square = 0.954$) for the 5 faculty experts and good ($\square = 0.826$) for the mean crowd-worker scores. C-SATS ratings provided excellent discrimination between passing and failing video performances as defined by faculty experts (area under ROC curve = 96.9%; 95% CI: 90.3%–100%).
CONCLUSIONS: A properly-sized and qualified crowd can accurately score laparoscopic skill performances on par with faculty experts. Crowd-based ratings may be an efficient method for assessing passing/failing performances, and for measuring change in performance after training.
SOURCE OF FUNDING: None

MP27-03 CONSTRUCT VALIDITY OF THE BASIC LAPAROSCOPIC UROLOGIC SURGERY (BLUS) SKILL TASKS

Timothy Kowalewski, Robert Sweet[1], Ashleigh Menhadjii[12], Timothy Averch[2], Geoffrey Box Bodo Knudsen[3], Timothy Brand[4], Michael Ferrandino[5], Jihad Kaouk[6], Jaime Landman[8], Benjamin Lee[8], Elspeth McDougall[10], Bradley Schwartz[7], Thomas S Lendvay[11]

[1]University of Minnesota (United States)
[2]University of Pittsburgh (United States)
[3]Ohio State University (United States)
[4]Madigan Army Medical Center (United States)
[5]Duke university (United States)
[6]Cleveland Clinic (United States)
[7]Southern Illinois University (United States)
[8]University of California Irvine (United States)
[9]Tulane University (United States)
[10]University of British Columbia (United States)
[11]Seattle Children's Hospital, University of Washington, (United States)
[12]Boston University (United States)

INTRODUCTION AND OBJECTIVES: The American Urological Association created the BLUS skills tasks as an objective assessment tool to determine laparoscopic skills proficiency. Our goal was to assess the ability of these proposed tasks and metrics to objectively discriminate skill levels.
METHODS: 117 subjects participated across eight different urologic centers in the United States; all were given four dry-lab laparoscopic tasks: Peg Transfer, Cutting, Suturing, and Clip Applying. We employed the Electronic Data Generation and Evaluation platform (Simulab Corp, Seattle WA) to record synchronized video and tool motion metrics for all tasks along with proctor-recorded task errors. Two methods were used to establish 'ground truth' skill levels: demographically- derived status and blinded video review by five faculty urologists employing the Global Objective Assessment of Laparoscopic Skills (GOALS) instrument for a representative subset of the database (12 suturing, 12 peg transfer; maximum, median, and minimum task times). We employed Pearson's correlation to evaluate agreement between metrics and ground truth.
RESULTS: Demographically-derived skill categories failed to provide statistically-significant skill discrimination. Blinded video GOALS evaluation did provide skill discrimination. Task time, path length, and motion smoothness (jerk cost) correlated with ground truth (-0.69, -0.69 -0.79 respectively) for Peg Transfer and (-0.86, -0.91 -0.84 respectively) for Suturing ($p < 0.01$). Economy of motion and force consensus depended on their definition.
CONCLUSIONS: Careful selection of skill categories is critical for validation studies. The BLUS Peg Transfer and Suturing skill tasks showed good construct validity based on a consensus of established objective metrics and blinded video review by the expert faculty panel.
SOURCE OF FUNDING: American Urological Association

MP27-04 THE SHEEP AS AN ANIMAL MODEL FOR COLLECTING SYSTEM HEALING STUDIES AFTER PARTIAL NEPHRECTOMY

Bruno Marroig[1], Waldemar S. Costa[1], José A. Damasceno-Ferreira[1,2], Diogo B. De Souza[1], Fábio O. Ascoli[3], Marco A. Pereira-Sampaio[1,4], Francisco J.B. Sampaio[1]

[1]Urogenital Research Unit, State University of Rio de Janeiro (Brazil)
[2]Department of Veterinary Clinical Pathology, Fluminense Federal University (Brazil)
[3]Department of Physiology and Pharmacology, Fluminense Federal University (Brazil)
[4]Department of Morphology, Fluminense Federal University (Brazil)

INTRODUCTION AND OBJECTIVES: Evaluate sheep as an animal model for studying collecting system healing after laparoscopic partial nephrectomy.
METHODS: The caudal pole of the left kidney was removed by laparoscopic partial nephrectomy in eight female adult domestic sheep. Monopolar energy was used for hemostasis only in the parenchyma, avoiding coagulation near the collecting system, which was left opened. After 14 days, all animals were euthanized and the left kidney was removed. Serum levels of urea and creatinine were assessed preoperative and postoperative (days 2, 6, 10, 14) and peritoneal fluid samples were also collected during