

Highlights of the 34th Annual Ralph E. Hopkins at Jackson Hole Seminars (JHS) on February 7-12, 2014, Jackson Hole, WY, USA

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The prestigious Jackson Hole Seminars (JHS) successfully gathered several world leaders in academic urology and urologists in private practice for a unique scientific experience in Wyoming, USA. Unfortunately, this year Dr. Ralph Hopkins' seat was empty but his spirit continue to be the driving force for the meeting's excellence and friendship. The JHS has pioneered the concept of a Critique Panel comprised of previous speakers that would discuss in depth

the presentations of the faculty chosen by the scientific board of the JHS. The 2014 JHS featured Dr. Fernando J. Kim, the President of JHS, Dr. Robert Flanigan, the Program Chair, and the Critique Panel that included: Drs. Peter Albertsen, Arthur Burnett, Michael Coburn, Ann Gormley, and Marshal Stoller. The invited speakers were: Drs. Leonard Gomella (1st prize), Olivier Traxer (2nd prize), Jennifer Anger, Anthony Bella, Jim Hu, and Allen Morey. Some of the in depth discussions and topics are highlighted.

Key Words: Jackson Hole Seminars, PSA, prostate cancer, US Task Force, endourology, andrology, female and reconstructive urology

Andrology

Testosterone deficiency syndrome (TDS) is characterized by deficiency in serum testosterone (T) levels and it may involve changes in receptor sensitivity to androgens. TDS is also known as hypogonadism, late onset hypogonadism and formerly known andropause. The clinical manifestations may include: decreased libido, decreased vitality, fatigue, mood changes, insomnia, anemia, delayed ejaculation, flushes, erectile dysfunction, decreased muscle mass, increased visceral body fat, testicular

atrophy, weakness. osteopenia/osteoporosis, loss of facial, axillary and pubic hair depending on the degree of deficiency.^{1,2}

The challenge remains in defining the threshold of T levels to distinguish eugonadal from hypogonadal men. A collaborative effort led by the American Urological Association (AUA) between practicing clinicians, patient advocacy groups, government regulatory agencies, industry, and professional societies is underway to provide optimized assay platforms and evidence-based normal assay ranges to guide clinical decision making. The Food and Drug Administration (FDA) uses a cut off value of 300 ng/dL to define hypogonadism for clinical trial development and enrollment. Meanwhile, a consensus statement from the International Society of Andrology, the International Society for Study of the Aging Male, the European Association of Urology, the European

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Association of Andrology, and the American Society of Andrology recommended that total T levels above 350 ng/dL do not require treatment, and levels below 230 ng/dL (with symptoms) may require T replacement therapy. For levels between 230 ng/dL and 350 ng/dL, the recommendation is to repeat the total testosterone (TT) with sex-hormone binding globulin (SHBG) for calculation of free T (FT) or direct measurement of FT by equilibrium dialysis. Also, it was recommended that men with TT < 200 ng/dL be treated as hypogonadal, those with TT > 400 ng/dL be considered normal, and those with TT 200 ng/dL-400 ng/dL be treated on the basis of their clinical presentation, if symptomatic.³

Genitourinary oncology

The use of Androgen Deprivation Therapy (ADT) is indicated for patients with prostate cancer: undergoing radiation in intermediate/high risk prostate cancer; immediately after the diagnosis of metastatic prostate cancer; for prostate volume reduction prior brachytherapy and at treatment failure of localized disease (rising PSA after radiation or radical prostatectomy).^{4,5}

The optimal results of ADT is to achieve low levels of testosterone < 50 ng/dL (controversial if < 20 ng/dL is needed). Antiandrogen 7 days prior LHRH agonist may prevent disease flare in patients with metastasis.⁶

The ADT options included bilateral orchiectomy, use of estrogens, LHRH agonists and antagonists, ketoconazole and new agents (abiraterone) for metastatic castration resistant prostate cancer (mCRPC).⁷⁻¹¹

ADT guidelines include the AUA 2007 and National Cancer Center Network (NCCN) 2014 that included the use of ADT for metastatic M0/M1 ADT naïve patients.^{12,13}

The U.S. Preventive Services Task Force recommendations of prostate cancer was discussed including the pros and cons of this new public health policy. It certainly stimulated renewed dialogue about prostate cancer screening and better understanding of the disease and the patient centered care by including active participation of primary care providers and urologists and patients. The contradictory studies caused much publicity but confused the public and urologists and their governing boards worldwide. The PLCO study showed no reduction in prostate cancer mortality but the largest randomized study ESRPC demonstrated a reduction in 20% mortality and 25% reduction in metastatic disease as the Goteborg trial showed 44% reduction in mortality.^{14,15}

Minimally invasive surgery

Laparoscopic live donor nephrectomy (LLDN) has become the optimal approach for living donor nephrectomy, due to less postoperative pain, quicker convalescence, decreased morbidity, and improved cosmetic appearance compared to the traditional open approach. Using logistic regression to assess factors associated with estimated blood loss (EBL), when dichotomizing to > 50mL versus < 50 mL, there was no statistically significant covariables. Similarly, no covariables were identified associated with complications that required intervention (Clavien grade 2b, 2c) or length of hospitalization. The number of renal arteries, early renal arterial branching, and late renal vein confluence affect LDN operative time, EBL, and complications. These factors should be considered in training centers, particularly during the early LDN learning curve.¹⁶

Female and reconstructive urology

Comparison of cost of robotic assisted versus pure laparoscopic abdominal sacrocolpopexy (RASC versus LASC). Patients with symptomatic stage ≥ II pelvic organ prolapse were randomized to LASC or RASC on the day of surgery. Costs of care were based on each patient's billing record and equipment costs at each hospital (UCLA and Loyola Medical Center). All costs associated with surgical procedure including costs for robot and initial hospitalization and any re-hospitalization in the first 6 weeks were compared between groups. Secondary outcomes include postoperative pain, anatomic outcomes, symptom severity and quality-of-life, and adverse events. Power calculation determined that 32 women in each arm would provide 95% power to detect a \$2500 difference in total charges. They concluded that the cost of RASC are higher than LASC, while short term outcomes and complications were similar. Primary cost differences resulted from robot maintenance and purchase cost.¹⁷

Artificial urinary sphincter (AUS) implantation is the gold standard surgical treatment for severe post-prostatectomy urinary incontinence. Despite a dry rate of up to 90%, constant pressure on the urethral wall can cause atrophy and erosion. Urethral erosion occurs in up to 6% of patients with an AUS and it is associated with secondary infection and a high reoperation rate of 27% to 36%. After removal of AUS, de novo sphincter reimplantation may be considered in 12 weeks. However, technical challenges can dictate the success rate of a new procedure. Several techniques have been tested i.e.; transcorporeal cuff placement and

other complex measures to buttress or reconstruct the urethra, cadaveric allograft fascia around the urethra and beneath the sphincter cuff to improve coaptation in urethral atrophy but results are inconsistent or limited. A novel approach that appears promising is buttressing the urethral wall before inserting another AUS cuff.¹⁸

Endourology

Much was learned on presentations about tips and tricks in ureteroscopy. Dr. Taxer reinforced the need of recognizing the instrumentation used for ureteroscopy during the treatment of stones. Each brand has its own orientation to maneuver the scope, as well as a signature mark to identify where the laser fiber or basket exit the ureteroscope. The use of ureteral access sheaths and tricks to treat stones allowed the audience to review their knowledge and practice in regards to intracorporeal lithotripsy. A comprehensive analysis and presentation of laser setting during lithotripsy demonstrated that less stone retropulsion occurred with small laser fiber diameters at constant pulse energy, while higher energy settings translated in more stone retropulsion. Also, stone “dusting” was achieved when laser settings had higher frequency and low energy while fragmentation depended on low frequency settings with high energy.¹⁹

The management of upper tract urothelial cancer with ureteroscopy when indicated could be better treated with a “no touch technique” minimizing guide wire trauma that could obscure findings, no dilatation of the ureter for access as described by Bagley et al.²⁰ □

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