



SSMR NEWS

Fall Society for the Study of Male Reproduction 2012

President's Message



Keith Jarvi, MD, FRCSC

The SSMR is “our” organization supporting not only the growth and development of clinical, research and educational excellence in the area of male reproduction but also acting as an advocacy group to inform and educate the public, governmental and funding organizations and our medical peers about the critical importance of work on male reproduction.

The public and our medical peers’ perception about the importance of male reproduction helps to either drive or limit the kinds of resources that we have available for clinical treatments and research. If we are seen to be of less importance or to “play second fiddle” to other areas of medicine, then we will have fewer resources. This has downstream effects on the numbers of clinicians and researchers entering our field of male reproduction, which of course has direct impacts on our patients with male infertility.

Over the course of the past year, under the direction of the president, Natan C. Bar-Chama, MD, members of the SSMR have worked tirelessly and extremely effectively to help advance the profile of work in male reproduction. Dr. Bar-Chama and members of the board of the SSMR were involved with the CDC as they developed a new focus on male fertility and men’s health, with the AUA as they developed new guidelines on men’s health and with numerous other organizations interested in men’s health. As a specialty we are really gaining ground as both our peers and the government are coming to appreciate what the members of the SSMR have known all along: men and men’s health matter. In fact, I don’t think that there has ever been a better time to be involved in the area of male reproduction than right now.

Public education and a source of reliable information for the public about male reproduction are also of paramount importance for the SSMR. Over the past year, the SSMR has spent a lot of time on improving the SSMR website with the goal to make this website the premiere portal for patient information about male reproduction. The website to be released this year is much more user friendly and has significantly more content for patients. In addition there will be a “Find a Doctor” section allowing patients to more easily find SSMR doctors who could help manage the couple’s infertility. Members of the SSMR will be able to provide either links to websites or short profiles with videos if useful on the SSMR website, allowing the patients to understand the services offered by the doctor and how that physician could be contacted.

Ongoing educational events for the members are also important for the SSMR. Our major educational activity every year is the annual SSMR meeting. With the generous support of our sponsors—the Sexual Medicine Society of North America, Slate Pharmaceuticals, California Cryobank and Vascular Technology—this past meeting featured extraordinary seminars on “Sperm Banking” and “Friends and Foes: Threats to Male Reproductive Health.” The luncheon seminar on “Sperm Banking” presented us with a very practical approach to the legal, psychological and laboratory issues of sperm banking. Since most of the attendees were urologists, many of these issues are things that we do not see in everyday practice. Clear and interesting presentations by Susan Crockin, Dr. Andrea Braverman and Scott Brown were very well received. The luncheon was followed by the annual SSMR meeting seminar which this year was directed by Dr Dan Williams. There was a fascinating and highly informative series of lectures on potentially preventable threats to male fertility: from lifestyle threats like weight, drugs and alcohol, to the only too prevalent use of anabolic steroids, to iatrogenic causes of male

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infertility from medications to surgery, to trauma either in the domestic or military conflict setting. This series of lectures really did emphasize that we and the public need to be much more aware of how to prevent male infertility (an ounce of prevention is worth a pound of cure). Some threats to infertility are not preventable: cancer therapy required to save lives often causes male infertility. The last series of lectures gave an update on the newest work on methods to preserve fertile futures for men and boys with cancer.

Finally, this last year saw a continuation of our successful Men's Health Traveling Fellowship program in collaboration with the SMSNA and the second year of the Arnold Belker Traveling Fellowship. This was a highly competitive process with many more applicants than we were able to support. Congratulations to the winners of the traveling fellowship awards.

This has been a very eventful and successful year for the SSMR. I would personally like to thank Dr. Bar-Chama for his superb leadership over the past year and for the board of the SSMR for their ongoing enthusiasm, energy and imagination. Our society also relies on effective management which was ably provided by Debbie Roller and WJ Weiser & Associates.

I am hopeful that the successes the SSMR has experienced last year will continue again this year. This is a fabulous time to be working in the area of male reproduction. There is expanding interest among the public and government in male reproduction. The SSMR can continue to contribute to this growth in interest by emphasizing to the public and the government the importance of men's reproductive health to family and public health.

Things to look out for this year include the new SSMR website, next

year's annual meeting (seminar concentrating on male infertility as a marker of men's health), expanded AUA post-graduate courses (infertility investigation and surgery, vasectomy and vasectomy reversal and, for the first time, a new course on the investigation and management of men with scrotal pain).

The major new initiative that the board of the SSMR has decided to embark on this year is to develop clinical research projects through the SSMR. There is an urgent need for male infertility databases to help answer some of the basic questions in male reproduction. The SSMR is now actively recruiting sites to participate in the Andrology Research Consortium (ARC): if you are interested e-mail arc@mtsinai.on.ca.

The SSMR is "our" society and I think is an important organization. As members of the SSMR working in the area of male reproduction, the SSMR members appreciate the impact our work has on the lives of couples and public health. This impact is not always appreciated by those working outside of our area. The SSMR can really make a difference in how the government, our peers and the public perceive the importance of male reproduction. The SSMR strength is in its members. I encourage you to become involved with the SSMR by volunteering for positions in the SSMR, sending us your ideas and contributing articles for the newsletters.

Next year's annual meeting of the SSMR promises to be exciting. I hope to see you all there! ◀

Keith Jarvi, MD, FRCSC

President, the Society for the Study of Male Reproduction

2012 ASRM Events of Interest

American Society for Reproductive Medicine

68th Annual Meeting

October 20 – 24, 2012

San Diego Convention Center
San Diego, CA

Saturday, October 20, 2012

Post Graduate One-Day Course

The Male is Half the Picture: Emerging Clinical and Laboratory Issues Affecting Male Reproductive Competence

Faculty: Grace M. Centola, PhD, HCLD, Chair; Gerald P. Schatten, PhD; Peter N. Schlegel, MD; Paul J. Turek, MD

Sunday, October 21, 2012

Post Graduate One-Day Course

Coding for Reproductive Medicine Practices 2012

Faculty: John T. Queenan, Jr., MD, Chair; George A. Hill, MD

Post Graduate One-Day Course

Regenerative Medicine: Promise, Pitfalls and Realities

Faculty: Gerald P. Schatten, PhD, Chair; Pasquale Patrizio, MD; Gianpiero Palermo, MD, PhD; Alan O. Trounson, PhD

Post Graduate One-Day Course

The Process of Fertilization: Dialogue Between Gametes

Faculty: Kersti Lundin, PhD, Chair; M. Cristina Magli, PhD; Christopher Barratt, PhD; John Carroll, BSc

Post Graduate One-Day Course

Male Reproductive Microsurgery: A Hands-On Course

Faculty: Mark Sigman, MD, Chair; Peter N. Schlegel, MD; Peter T.K. Chan, MD; Philip S. Li, MD

MONDAY, OCTOBER 22, 2012

1:15 p.m. – 2:15 p.m.

Interactive Session

Paternal Age Concerns:

What Should be Telling Our Couples?

Grace M. Centola, PhD (Chair)

Paul J. Turek, MD

Edward D. Kim, MD

1:15 p.m. – 2:15 p.m.

Roundtables

RTM15. Sperm Banking and the Cancer Patient

Daniel H. Williams, MD

RTM16. Sperm Retrieval in Men with Spinal Cord Injury

Nancy L. Brackett, PhD

RTM17. The Andrology Lab and Treatment of HIV-Discordant Couples
Erma Z. Drobnis, PhD

RTM21. The Burden of Choice: Helping Couples Cope with Negative Results of Prenatal Testing
Joann P. Galst, PhD

RTM34. MicroTESE
Peter N. Schlegel, MD

RTM35. Vasectomy
Marc Goldstein, MD

2:45 p.m. – 3:30 p.m.

Plenary Lecture 3
Role of the Epididymis in the Acquisition of Male Fertility: How Epithelial Cells Create the Optimal Luminal Environment for Sperm Maturation
Sylvie Breton, PhD

4:15 p.m. – 6:15 p.m.

Oral Abstract Sessions
Male Reproduction and Urology: Research

4:15 p.m. – 6:15 p.m.

Symposium
Additional Indications for Varicocele Repair
Peter T.K. Chan, MD
Marc Goldstein, MD
Armand S. Zini, MD
Edward D. Kim, MD

4:15 p.m. – 6:15 p.m.

Symposium
Assisted Reproduction for the HIV-Discordant Couple
Erma Z. Drobnis, PhD (Chair)
Sangita K. Jindal, PhD
Ann Kiessling, PhD
John Y. Phelps, JD, PhD

5:45 p.m. – 6:15 p.m.

Society for Male Reproduction and Urology Minisymposium
Drugs, Chemicals and Sperm
Rebecca Z. Sokol, MD, MPH

TUESDAY, OCTOBER 23, 2012

9:45 a.m. – 10:30 a.m.

Plenary Lecture 5: Herbert H. Thomas Lecture
The Neurobiology of Sexuality: It's Not Just About Testosterone
James G. Pfaus, PhD

1:15 p.m. – 2:15 p.m.

Roundtables

SSMR
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2012 – 2013

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RTT08. Genetic Screening for Gamete Donors: What's New?
Amy C. Vance, MS

11:15 a.m. – 1:00 p.m.

RTT14. HPV Vaccination and Management for the Male
Darius A. Paduch, MD

RTT25. Good Tissue Banking Practices for Long-Term Storage of Gametes and Embryos
Marybeth Gerrity, PhD, MBA

1:15 p.m. – 2:15 p.m.

RTT30. Solutions for the Small Practice or Solo Practitioner
Joseph J. Travia, Jr., MBA

1:15 p.m. – 2:15 p.m.

RTT31. Oncofertility Options for Boys
Kyle Orwig, PhD

4:15 p.m. – 6:15 p.m.

**Symposium
Androgen Use and Abuse in the Male and Female: What All Reproductive Clinicians Need to Know**
Ajay K. Nangia, MD (Chair)
Rebecca Z. Sokol, MD, MPH
William D. Petok, PhD
Mohit Khera, MD

4:15 p.m. – 6:15 p.m.

Oral Abstract Sessions
Male Reproduction and Urology:
Traveling Scholars

5:45 p.m. – 6:15 p.m.

**Society for Male Reproduction and Urology Mini-Symposium
Detecting and Treating Male Factor Infertility**
Gianpiero D. Palermo, MD, PhD

**Symposium
Is the Basic Semen Analysis Still Valuable or Is Sperm Function Testing the Best Way to Assess Male Reproductive Capacity?**
Amy E. Sparks, PhD (Chair)
Armand S. Zini, MD
Sergio C. Oehninger, MD, PhD

**Interactive Session
Antisperm Antibodies**
Grace M. Centola, PhD (Chair)
Ajay K. Nangia, MD
Erma Z. Drobnis, PhD

Roundtables

RTW11. Treating Patients/Minimizing Conflict: Legal Aspects of Treating Same Sex Couples
Reagan N. Rasnic, JD

RTW12. The Role of Sperm Cell in Early Embryogenesis
Douglas T. Carrell, PhD

RTW13. Reactive Oxygen Species and Male Infertility
Richard A. Bronson, MD

RTW14. Male Fertility Evaluation: It's About Your Health
Larry I. Lipshultz, MD

RTW15. The Role of the Journal *Fertility & Sterility* to Members of the ASRM
Antonio Pellicer, MD

WEDNESDAY, OCTOBER 24, 2012

9:00 a.m. – 9:45 a.m.

**Plenary Lecture 7:
American Urological Association
Bruce Stewart Memorial Lecture
Identifying the Genes that Control
Reproduction Using a Human Disease
Model**
William F. Crowley, Jr., MD

3:45 p.m. – 5:45 p.m.

Oral Abstract Sessions
Male Factor: ART

11:15 a.m. – 1:00 p.m.

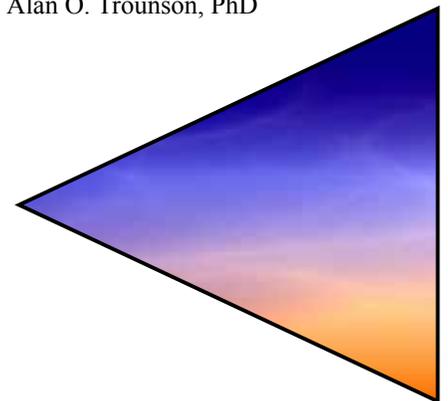
Oral Abstract Sessions
Male Reproduction and Urology:
Clinical

5:15 p.m. – 5:45 p.m.

**Society for Male Reproduction and Urology Mini-Symposium
Stem Cell Developments and Medical Applications**
Alan O. Trounson, PhD

11:15 a.m. – 1:00 p.m.

**Symposium
Modernizing the Patient Experience
in Reproductive Medicine**
Kira Copperman, LMSW (Chair)
Sharon L. LaMothe
Douglas Weiss



2012 SSMR Annual Meeting at the AUA Course Summaries

Plenary Session Topics Sunday, May 20, 2012 Reviewer: Peter Stahl, MD

Tuesday afternoon's Infertility: Therapy podium session was an exciting and diverse session during which novel data were presented pertaining to fertility preservation (FP), surgical sperm retrieval, varicocele and vasectomy reversal.

The first three presentations were focused upon various aspects of male FP. Dr. Darren Katz et. al. presented data from John Mulhall's group at Memorial Sloan-Kettering Cancer Center (New York, NY) on outcomes of fertility preservation in teenagers with cancer. The authors reported their experiences with EEJ (83% ejaculation rate) and testicular sperm extraction (48% sperm retrieval rate) in this population. Sperm acquisition rates were best in patients at least 14 years old with Tanner stages of at least 4. No complications were observed. This small but important study highlights the safety and efficacy of FP in teenagers and provides a simple, algorithmic approach for clinical implementation.

Next Dr. Daniel Stein et. al. presented results of a qualitative, focus group-based study conducted at Northwestern University (Chicago, IL) to better elucidate preferences and viewpoints about FP amongst adult male survivors of childhood cancer and their parents. This methodologically sound and well-validated approach provided many important insights. Patients and their parents both expressed significant regret that FP was not routinely discussed at the time of their cancer diagnosis, that they valued discussions focused on FP, and that they believed boys faced with cancer ought to be included as much as possible in discussions about FP.

The final presentation on FP was from Dr. Clarisse Mazzola et. al. at Memorial Sloan-Kettering Cancer Center, who presented John Mulhall's data on ex vivo testicular sperm extraction at the time of radical orchiectomy for azoospermic men with testis cancer. This pilot study of 9 men with testis cancer revealed sperm retrieval rates of 33% and 50% for the overall cohort and patients who had not received prior gonadotoxic therapy, respectively. These data demonstrate the utility of ex vivo testicular sperm extraction at the time of radical orchiectomy, and emphasize the importance of evaluating fertility with a semen analysis prior to radical orchiectomy.

Dr. Ranjith Ramasamy from Cornell (New York, NY) next took the stage to present data from Peter Schlegel's group regarding the localization of retrieved sperm in men with nonobstructive azoospermia (NOA) undergoing microdissection testicular sperm extractions (mTESE). Examination of data from 900 first-attempt mTESEs revealed a sperm retrieval rate of 53%. Among those NOA patients in whom sperm were found, 65% had sperm identified in

tissue exposed after the initial wide incision of the first testis. In the remainder of cases, extensive microdissection was required. Sperm were found in the contralateral testis after unsuccessful extensive microdissection of the ipsilateral testis in 8% of cases. These data argue strongly that complete, bilateral testicular microdissection should be the gold standard approach to surgical sperm retrieval in men with NOA.

Dr. Ethan Grober (Toronto, ON) next shared his group's exciting and novel work in the application of hand motion analysis (HMA) to intra-operative assessment of microsurgical skill. This important work suggests that HMA is an objective, reliable tool for assessment of microsurgical technical skill that can feasibly be implemented in the operating room. The hope here is that this technology will enable establishment of competency-based learning surgical learning curves that can be useful in the training and assessment of future microsurgeons.

Dr. Grober also presented his group's large experience with vasectomy reversal in patients with obstructive intervals of 10 years or greater. This study of more than 500 vasectomy reversals enabled comparison of outcomes according to the age of the vasectomy, and is notable for inclusion of 177 patients with greater than 10 years of vasal obstruction. Grober reported patency rates of 87%, 94% and 92% in men with obstructive intervals of 10 – 15 years, 15 – 20 years, and >20 years, respectively. More importantly, pregnancy rates after vasectomy reversal reported in patients with >10 years of vasal obstruction were comparable to the published SART pregnancy rates in age-matched couples undergoing IVF. These data strongly support that vasectomy reversal remains an important therapeutic option for patients with long durations of vasal obstruction.

Paulina Mui and Dr. Paul Turek (San Francisco, CA) presented a retrospective review of 165 consecutive vasectomy reversals and examined the relationship between vasectomy age and need for unilateral or bilateral vasoepididymostomy. Vasoepididymostomy was required in 40% of cases. The investigators found that the rate of needing either unilateral or bilateral vasoepididymostomy increased linearly over vasectomy ages 1 – 21 years, but plateaued off from vasectomy ages 22 – 37 years. They hypothesized that down regulation of sperm production such as may occur in "older" vasectomies may protect against epididymal "blowout" and the development of secondary epididymal obstruction.

Drs. Vidit Sharma, Kunj Sheth, Sherwin Zagaroff and colleagues next presented results of a thought-provoking study that examined the relationship between economic conditions, vasectomy rates and vasectomy reversal rates at three busy male reproductive surgery programs in the United States. A retrospective chart review was conducted to identify the number of vasectomies and vasectomy

reversals per month from January 2001 to July 2011. They then pooled the incidence of these procedures (4,599 vasectomies and 1,535 vasectomy reversals) and correlated procedure volume per unit time with publically available national economic data. They discovered that a higher vasectomy incidence was associated with a recessionary economy, whereas more vasectomy reversals were performed during times of economic expansion. These data point to the importance of financial pressures on family planning decisions, which should be taken into consideration during public policy decisions that affect vasectomy and vasectomy reversal.

Drs. Sharma, Sheth and Zargaroff also presented the Northwestern group's research on demographics and family planning attitudes of vasectomized men, which was performed by analysis of data extracted from the National Survey for Family Growth (NSFG). Descriptive statistics and multivariate regression models were utilized to study characteristics of the vasectomized population. Their most important findings were that the vasectomy prevalence in the United States population of men aged 18 – 45 is 6.6%, far lower than the 16.4% prevalence of tubal ligation. Surprisingly, they also identified that 19.6% of vasectomized men in the US desire future children. This statistically robust study highlights the underutilization of vasectomy in comparison with tubal ligation and the importance of preoperative counseling for permanency of vasectomy.

Drs. McGill, Baker and Sharma presented their retrospective analysis of the effects of microsurgical varicocele ligation performed by a single, experienced surgeon on semen quality. They reported significant increases in mean sperm concentration (3.4 million/ml, $p=0.023$), total motile sperm count (15.8 million, $p = 0.014$), and sperm DNA fragmentation (15% reduction, $p = 0.005$). Patients with larger varicoceles, a longer duration of infertility and poor baseline sperm DNA integrity experienced the most significant improvements in semen quality. This study provides further evidence of the beneficial effects of microsurgical varicocele ligation on semen quality.

Drs. Zhang, Liu, and Zhang et. al. then presented an interesting intraoperative assessment of the value of optical magnification during microsurgical varicocele ligation. For 42 operations, one surgeon mimicked a traditional "macroscopic" varicocele ligation by identifying, isolating and encircling the presumed internal spermatic veins, lymphatics and arteries. Another surgeon then immediately evaluated the same spermatic cord under x8-x10 optical magnification provided by an operating microscope to investigate how many veins were missed and how many lymphatics and arteries would have been ligated because of incorrect identification during the mimicked "macroscopic" approach. They found that in the traditional, nonmicrosurgical approach an average of 2.14 ± 1.26 internal spermatic veins were missed, and that an average of 0.69 ± 0.84 lymphatics and 0.74 ± 0.74 arteries would have been ligated. This provides further evidence of the value of the operating microscope during varicocele ligation surgery.

045PG: Vasectomy: Optimum Surgical Technique, Preoperative Counseling, and Postoperative Management

Speakers: Ira D. Sharlip, MD; Stanton C. Honig, MD; Joel L. Marmor, MD; Jay I. Sandlow, MD

Monday, May 21, 2012

Reviewer: Kelly Chiles

Intro

Vasectomy is the most common non-diagnostic procedures performed by urologists in the US (>500,000/year). If performed properly, a pre-vasectomy counseling session can be billed as a level 3 professional service.

Pre-op Counseling

At a minimum, the following concepts need to be conveyed to, and understood by, the patient: vasectomy is a permanent sterilization procedure; it does not produce immediate sterility and other forms of contraception are necessary until vas occlusion (VO) is confirmed; even after VO, sterility is not guaranteed (pregnancy rate after VO is 1/2000); repeat vasectomy may be necessary; options for fertility after vasectomy are expensive and not always successful.

Risks in addition to the above include: hematoma and chronic scrotal pain.

Other permanent and non-permanent family planning options should be discussed.

Data relating to long-term risks of vasectomy do not need to be discussed because of a lack of supporting evidence (such as prostate cancer, testis cancer, etc.).

There is no need for routine pre-operative labs unless there is reason for concern, such as liver disease or a bleeding diathesis. No pre-operative antibiotics are needed unless the patient is immune compromised.

Post-operatively the patient should abstain from ejaculation for ~7 days.

Anesthetic Technique

Local anesthesia with 25 – 32g needle without oral sedation most commonly utilized with great success.

Accessing the Vas

Multiple methods include: No scalpel vasectomy (NSV) – utilizes pointed hemostat; open access – useful for men with thick scrotal skin; single incision midline approach – should be just below penoscrotal angle and may leave shortened testicular segment and increase risk of epididymal congestion to >3%; high bilateral scrotal incision – should be at or above penoscrotal angle and leaves longer testicular segment.

Choice of incision is surgeon's preference, but regardless of choice isolation of vas warrants an incision <10mm with minimal peri-vasal dissection.

Vas Occlusion

MANY successful methods of VO, however, three which appear to have success rates of <0.6% and are recommended for young vasectomists learning the technique:

1. Mucosal cautery of both ends WITH fascial interposition (FI)
2. Mucosal cautery of both ends
3. Mucosal cautery of abdominal end only WITH FI

VO with ligatures or clips (+/-FI) has published failure rates of up to 8.7%, however, this is still a viable method of VO if individual surgeons feel that their success rates are acceptable (ie. <1% failure rate).

FI greatly decreases the failure rate (including late recanalization), and is mandatory when only abdominal end is cauterized.

“Folding” vas or excising >3cm does not improve failure rate, and irrigating vas does not decrease time to azoospermia.

Post-Vasectomy Semen Analysis (PVSA)

Post-operative PVSA visit should be scheduled for patient to greatly improve compliance. Timing of PVSA is at surgeon’s discretion, however, if done at 12 weeks, one specimen examined <2hrs after production which reveals azoospermia or $\leq 100k$ nonmotile sperm/ml provides clearance (patient can stop their contraception).

Complications

<2% incidence of complications (hematoma and infection). Sperm granuloma is not a complication (expected if testicular end left open). Most cases of “post-vasectomy epididymitis” are not infectious, but are secondary to epididymal congestion.

Sexual Function / Dysfunction / Andrology / Evaluation I

Speakers: Hardin, Stone, Koyunco, Soh and Aksam A. Yassin, MD, PhD, EdD

Monday, May 21, 2012

Reviewer: Alexander W. Pastuszak, MD, PhD

The Sexual Function / Dysfunction / Andrology / Evaluation I poster session brought together the old and the new, addressing numerous contemporary issues in sexual function and andrology ranging from long-duration testosterone formulations to a novel method for real-time imaging of penile erections. The highlights of the session for this author included evaluations of 1) the relationship between coronary artery disease (CAD) and erectile dysfunction (ED), 2) the relationship between serum testosterone (T), body mass index (BMI), fat consumption, and exercise, 3) intravaginal ejaculatory time in lifelong premature ejaculation (PEJ) patients with and without monosymptomatic enuresis, 4) real-time evaluation of penile erection using MRI, and 5) the reduction in obesity in men using long-acting testosterone undecanoate. While numerous other posters were of interest to the general and specialist urologist, the above either focused on concepts that are critical to men’s health or were significantly innovative.

Recent work has demonstrated that men with ED have an increased risk of CAD. This is particularly true in men <50 years old with ED,

who have a 50-fold higher risk of cardiovascular events. Hardin and colleagues presented their work on the relationship between coronary artery disease and erectile dysfunction, with the goal of identifying men in urology clinics who are at risk for CAD. By correlating patient responses to the Coronary Artery Calcification Scale (CACS) with responses to the International Index of Erectile Function (IIEF) in a group of 409 men with ED as well as 203 controls, the authors found significantly higher mean CACS scores, suggestive of severe CAD, in men with ED. Furthermore, they correlated CACS with IIEF scores and demonstrated a linear, positive relationship, indicating that as ED symptoms worsen, so does CACS score, suggesting that the severity of ED is indicative of severity of CAD as well, and suggesting that men with ED have evaluation for CAD.

Another interesting study focused on the relationship between serum T, BMI, fat consumption, and exercise, with the goal of determining lifestyle factors that negative impact serum T levels. Using a cohort of 8,185 men who attended Prostate Cancer Awareness Week, Stone and colleagues evaluated the relationships between the above factors, and found BMI, fat intake, and age are all independently and inversely correlated with serum T levels. Interestingly, no significant impact of exercise on serum T levels was observed. These results further strengthen the association between lifestyle, particularly fat intake and BMI, and androgen deficiency, and highlight the need for lifestyle modification either concomitant with, or prior to, initiation of testosterone replacement therapy in the appropriate cohorts of men.

Switching gears to sexual function, premature ejaculation (PEJ), the most common male sexual dysfunction, likely results in significant angst in affected men, and with an imperfect understanding of the pathologic mechanisms, our current treatments are incompletely effective. Taking our understanding of PEJ one step further, Koyunco and colleagues demonstrate a relationship between monosymptomatic enuresis (ME), a form of involuntary bedwetting in children more than five years old, and PEJ. In comparing intravaginal ejaculatory latency time (IELT) in a cohort of 137 men with and without ME, the authors first observed that 42% of men with PEJ had ME during childhood. Next, they demonstrated a strong correlation ($\rho = -0.791$, $p < 0.001$) between severity of ME and IELT in men with a history of ME, thus implicating potentially hardwired neurologic processes in PEJ. While this work does not affect current PEJ treatment, the novel relationship between PEJ and ME may pave the way towards improved understanding of the pathophysiological mechanisms of PEJ, at least in a subset of affected men.

One of the most entertaining abstracts presented during this session involved the use of TurboFLASH MRI for evaluation of penile erection in real-time. Soh and colleagues set upon this work with the goal of obtaining high-resolution images of penile erections in real-time. While noting increases in length and diameter of the corpora during erection, and indicating that 110 – 120 seconds is required for complete tumescence and detumescence with a change in corporal volume of 28 – 35 mL, the presenting author showed a time-lapse video of both penile tumescence and detumescence detected using MRI in a subject who viewed erotic images which was not only educational, but very entertaining as well, drawing reactions from the otherwise stolid crowd.

Finally, this reviewer felt the most significant findings presented during this poster session (this group won the “Best Poster” award), was the work presenting the use of waist circumference as the best measure of health-related quality of life in men using long-acting testosterone undecanoate (TU). Yassin and colleagues evaluated the effects of TU on obesity in a cohort of hypogonadal men. TU is currently not available in the United States, although FDA approval appears nigh, but is used commonly in Europe and Canada. The authors showed that TU results in a significant reduction in obesity, and within the analysis asked the question of what is the best measure of obesity between waist circumference, BMI and weight loss. Using correlations between the above metrics and scores on three validated health-related quality of life questionnaires—the Sexual Health In Men (SHIM), International Prostate Symptom Score (IPSS) and Aging Male Symptom (AMS) surveys—the authors showed that only significant correlations between waist circumferences, but not the other two metrics, were observed with scores on all three questionnaires. This finding is significant, considering the need for a consistent way to monitor the interface between hypogonadal symptoms and changes in body morphology in the setting of T replacement therapy.

Taken together, the above findings highlight progress in the evaluation and treatment of multiple pathologies related to sexual function and demonstrate the bright future of the field.

Sexual Function / Dysfunction / Andrology / Evaluation 2

Monday, May 21, 2012

Reviewer: James M. Dupree, IV, MD

The Sexual Function/Dysfunction/Andrology: Evaluation Podium session #2 on Monday afternoon offered the audience a diverse group of presentations on today’s sexual health research.

There were four presentations about erectile function following radical prostatectomy. The group from Milan found that most patients recover their erectile function within the first year, but that some will still recovery function out to a maximum of 36 months after surgery. Regarding surgical technique, they found that in the first six months, robotic prostatectomy patients recover erectile function more quickly, but after six months, the rates of recovery equalize with open prostatectomy.

The Memorial Sloan Kettering Cancer Center (MSKCC) research group looked at erectile function recovery in men who had bilateral nerve resections as part of their radical prostatectomy in their database. They found that 13 percent of men with bilateral nerve resection recovered erectile function. Their recovery was slower than men with without nerve resection, and no men with poor baseline erectile function prior to surgery recovered erectile function following bilateral nerve resection.

The group from MSKCC also looked at factors associated with pain from intracavernosal injection therapy following radical prostatectomy. They found that within a group of men who experience pain with Trimix injection, the intensity of pain increased as the amount of nerve resection increased. They also found that there was more pain with increasing doses of Trimix. They hypothesized that the pain was due to hypersensitivity to PGE-1 in men with nerve damage.

Finally the group from Northwestern presented on the influence of body mass index on erectile function after radical prostatectomy. All of their studied men had normal pre-operative erectile function, and they excluded men with adjuvant therapy. They found that increased age, diabetes, and BMI > 30 were significantly associated with worse erectile function following surgery.

There were two presentations related to endocrine function. The Mount Sinai (NY) group presented a study of serum testosterone and obstructive sleep apnea among 2,121 male law enforcement personnel followed in the ‘first responder database’ developed after the World Trade Center attacks of September 2001. Using a hypogonadism cutoff of < 300 ng/dL and a Berlin screening for OSA, they found that hypogonadal men were more than twice as likely to screen positive for OSA as eugonadal men.

The Harvard group investigated the belief that high estradiol levels may suppress testosterone. They reviewed men with symptomatic hypogonadism (Testosterone < 350 ng/dL) and queried their testosterone, estradiol, and LH levels. They found that higher estradiol levels were actually associated with higher testosterone levels.

There were several other interesting presentations. The research team at MSKCC also presented about the effect of repeated prostate biopsies on sexual function. They evaluated 340 men on active surveillance. All received 14 core biopsies per protocol, and they were followed for three to seven years. There was no control group. They found that there was a decline in erectile function of about 1 point per year on the IIEF scale. They felt that this was likely a result of aging, and not a result of the prostate biopsies.

The MSKCC group also presented research about reliability of penile duplex ultrasound to diagnose cavernosal artery insufficiency. They found many community studies unreliable, and found that if men did not obtain a good erection during the ultrasound, the results were significantly less reliable.

Next the team from UCSF presented research about the sexual function in US soldiers who returned from the Iraqi and Afghanistan wars. They retrospectively queried the VA’s database for ICD-9 codes for post-traumatic stress disorder (PTSD), erectile dysfunction, and premature ejaculation. Interestingly, 78 percent of diagnoses and treatments were made in a primary care clinic, and only two percent were made in a urology office. They found that men with PTSD were much more likely than veterans without PTSD to report sexual dysfunction, even after adjusting for medications commonly used to treat PTSD.

The group from Tulane presented their analysis of the Coloplast’s post-market registry for inflatable penile prostheses. They found that coated IPPs had lower infection and revision rates than non-coated IPPs. However, the coated IPP only had eight years of follow-up as compared to 11 years for non-coated IPPs. Obviously, their results were limited to just one brand of penile implants.

The MSKCC group also presented a descriptive analysis of the delayed orgasm phenomenon. They found that most men with a primary diagnosis of delayed orgasm presented at an older age and the

duration from onset of symptoms to presentation to a physician was about three years. Risk factors for delayed orgasm were never having an orgasm with a partner, not having an orgasm with masturbation, new use of a selective serotonin reuptake inhibitor and abnormal penile sensation.

Finally, the group from Sao Paulo presented about the impact of spinal cord injury on sexual function in a female population. Their study group had a mean age of 38 years, and 36 percent of the women had a complete spinal cord injury. They found that the frequency of sexual activity decreased significantly and satisfaction with sexual life dropped dramatically following the injury. They also found a correlation between sexual satisfaction and general quality of life in these patients.

Pediatrics: Andrology – Cryptorchidism & Varicoceles
Monday, May 21, 2012
Reviewer: Bobby Najari, MD

This session began with a series of abstracts regarding varicocele. Dr. Guy Bogaert and colleagues (abstract #1364) presented a study from Belgium in which they followed up with 361 patients who were diagnosed with varicocele in the pediatric urology clinic from 1987 to 2005. They found that there was no difference in the paternity rates of men who had undergone treatment for their varicocele versus those that declined treatment (86% vs. 91% respectively). Their conclusion that there is no benefit to the screening and treatment of varicocele with regard to paternity generated much discussion, as the groups were not randomized and the treatment offered was sclerotherapy rather than the more conventional surgical varicocelectomy.

In regards to cryptorchidism, Dr. Jenny Yiee and colleagues (#1368) from UCLA examined how often boys with cryptorchidism undergo surgery at around 1 year of age, as recommended by the American Academy of Pediatrics. Using a claims database, they found that not only were the boys with greater continuity of care and more well care visits more likely to undergo a timely surgery, but patients referred by an internist rather than a pediatrician were less likely to undergo timely surgery. This information could help identify groups of physicians who might benefit from educational efforts regarding cryptorchidism.

Lastly, the increasing importance of oncofertility in the pediatric population was addressed by Dr. Vidit Sharma and colleagues (#1372) from Northwestern University. They reviewed the charts of 32 pediatric oncology patients who had attempted to bank sperm. Over 90% of were able to successfully bank sperm, however, 10 of them had sperm banked after receiving chemotherapy. This highlights that fertility preservation is possible in the pediatric oncology population, but that the issue needs to be raised earlier in the care of these patients.

Sexual Function/Dysfunction/Andrology: Peyronie's Disease and Surgical Therapy I – Podium
Tuesday, May 22, 2012
Reviewer: Devon Snow-Lisy, MD

Tool Development:

To begin the session, Dr. Hellstrom presented a culmination of eight years of work with the FDA: developing a Peyronie's Disease

questionnaire (PDQ). This 15-item questionnaire consists of three scales which include psychological and physical symptoms, penile pain and symptom bother. The questionnaire was validated in patients enrolled in the phase three study of collagenase clostridium histolyticum. Validation was achieved by comparison with the international index of erectile functioning (IIEF), physical assessments made by investigator and patient-reported severity of Peyronie's Disease symptoms. All three PDQ scales demonstrated good internal consistency, strong correlation with self-reported distress, and moderately correlated with measures of sexual satisfaction in the IIEF. Interestingly, and in keeping with clinical observations, patient distress correlated poorly with investigator-measured penile curvature. This questionnaire represents a major step forward and will help quantify treatment effect. If adopted widely, the questionnaire will allow comparison of different treatments in the literature.

Basic Science:

The biochemical pathology of Peyronie's Disease is yet to be fully understood and is complicated by the lack of an adequate animal model. Transforming growth factor beta (TGF- β) has been implicated in plaque formation and was injected by Drs. Lin and Wang prior to evaluating vacuum therapy for the treatment of penile curvature induced by TGF- β . Unfortunately, the rates of spontaneous improvement were left undefined for this animal model and it is unclear if the straightening of the rat's penises was related solely to increased clearance of TGF- β in the vacuum pump group. If this rat model accurately reflects active phase Peyronie's Disease, i.e. when TGF- β is most active, this study suggests that vacuum therapy would be most effective as early therapy when clearance of TGF- β would be most valuable. Efforts to develop and define better animal models were presented by the group from University of Western Ontario where they injected tetradecyl sulphate, a sclerosing agent, either alone or with TGF- β -1. The combination of TGF- β -1 and tetradecyl sulphate showed durability of induced curvature out to 9 weeks. It is unclear from this study whether these plaques persist past nine weeks and how accurately they reflect clinical Peyronie's plaques. Until this question is answered, the study of medical therapeutics (verapamil or traction therapy as presented by this same group) will have unclear clinical significance. An ideal animal model would demonstrate macroscopic similarities to Peyronie's plaques (i.e. durability, potential for calcification, propensity to induce curvature etc.) as well as cellular and molecular similarities (similar gene expression, cellular remodeling, and biochemical milieu). Further studies of Peyronie's plaques from humans will need to be analyzed for this to occur. Interestingly, Dr. Gor from Einstein presented a study in which the plaques from three patients were evaluated histologically, documenting significant relaxin receptor expression which supports the use of relaxin as a novel therapeutic. Further evaluation and characterization of human Peyronie's plaques in tandem to development and characterization of grossly acceptable animal models are laudable goals to further identify and test novel therapeutics prior to human trials.

Natural History of Peyronie's Disease:

Complicating any potential study of the treatment of the active phase of Peyronie's Disease is the potential for the curvature to change with time. Dr. Choi out of Mount Sinai attempted to identify factors involved in improvement or worsening of Peyronie's Disease. On multivariate analysis, predictors of disease stability were time to presentation > 6

months (OR 2.4 $p < 0.01$) and increasing age (OR 1.5 $P < 0.05$). While this study only included patients who chose to undergo conservative treatment (thereby inducing a large selection bias) this study does imply that active/early and quiescent/late Peyronie's Disease are indeed distinct clinical entities.

Further demonstrating the significant variety of disease, Dr. Rybak from Rush performed a retrospective review of 98 men with calcified plaques seen on ultrasound who were paired with a cohort that was matched for age, disease duration, date of presentation and mean curvature. While calcification alone did not influence progression to surgery, patients with large or multiple calcified plaques (> 1.5 cm or ≥ 2 plaques > 1.0 cm) were twice (OR 2.28) as likely to elect surgical intervention (95% CI 1.07-4.86).

Teasing out the relationship between the often concomitant erectile dysfunction and Peyronie's Disease, Dr. Serefoglu from Tulane University retrospectively evaluated 220 patients who had undergone Doppler ultrasound after intracorporal injection of 7-20 micrograms of prostaglandin E1. There was no difference between rates of arteriogenic, venogenic, mixed and no ED groups with respect to direction or severity of penile curvature.

Surgical Techniques:

Mehrad Adibi from Dallas presented the outcomes of 111 patients who had undergone a 2 cm longitudinal penile incision along the convex aspect of the shaft through which an IPP could also be placed if necessary followed by microdot placcation. They showed that 93% of patients felt their overall condition improved post surgery with complex cases having similar outcomes to simple cases.

Dr. Parker from University of South Florida reported their initial experience in seven patients using Biosyn suture, a suture that absorbs after 90 – 110 days. The rationale for using an absorbable suture is to avoid problems of prolonged patient bother associated with palpable suture knots. In this study of seven patients, the mean follow up was only 10 months (range 5 – 16 months) and after 3 – 4 months they found that no patient complained of palpable abnormalities along the suture line or recurrent of curvature. Of note: the patients were recommended to avoid coitus for six weeks after their procedure. Little is published regarding knot discomfort, but this appears to range up to 34% as published by Chahal in *BJU International* (2001) and Schultheiss in *European Urology* (2000). In a study of only seven patients with a follow-up that ranges from 5 – 16 months, it is impossible to make conclusions regarding the outcomes of tunical plication using non-absorbable versus absorbable suture.

Innovations:

During the last presentation of the day, a group out of Istanbul demonstrated the ease with which penile molds of the preoperative erect penis could be fashioned using the silicone materials typically used for dentistry molds. This group suggested reversed engineering techniques could lead to computer models which would facilitate preoperative planning. If feasible, these computer models may allow for improved characterization of the curvature, therein removing the unavoidable bias that comes with investigator-measured penile curvatures.

Others thought this technique would allow comparison of preoperative to postoperative length and curvature—potentially improving patient satisfaction. Different materials could be utilized which, if they accurately mimic the tissues of the penis, could also be useful for training.

Special Symposium – Sperm Banking 2012: An Update on Legal and Medical Issues

Speakers: Susan Crockin, Esq.; Andrea Mechanick Braverman, PhD; Scott Brown
Tuesday, May 22, 2012
Reviewer: Justin Johnson, MD

This broad discussion covered the medical-legal aspect of sperm donation and fertility preservation, the psychological and counseling issues facing our patients, and the business/ technical aspects of sperm banking. Susan Crockin Esq. provided an overview discussion of “ART Legal Issues for the Urologist Regarding Fertility Preservation and Sperm Donation.” Using current and historical cases Mrs. Crockin demonstrated the complexity of the legal system regarding ART issues. There are two types of legal issues – Family Law Issues and Programmatic Policies and Concerns (i.e. consents, fertility preservation, posthumous sperm, etc.). One important point raised was that “all that is constitutional is not wise.” Patients should clarify their expectations and their doctors should clarify consents; and we should remember that we are not legal counsel and get that input when required. Andrea Mechanick Braverman, PhD (psychologist) moderated a discussion on “General and Sperm Donor Counseling Your Male Infertility Patients.” She discussed the cognitive processes, emotional challenges and sources of influence that infertility patients experience. There are multiple feelings that can be associated with infertility – family/friend reactions, restrictions of medical history, disclosure issues, fear of child reaction and dealing with genetic inequalities between parents. We should encourage open communication and refer to mental health professionals as needed. Scott Brown provided an inside look at “Sperm Banks: The Ins and Outs of How They Work.” He reiterated that males undergoing orchiectomy who suffer testicular trauma possibly prior to military deployment—all groups with potential for lower fertility in future—should sperm bank. In regards to sperm donation, he reviewed donor recruitment and the rigorous screening process that donors must complete prior to being final approval – multiple semen analyses, thorough family history and detailed genetic evaluation and counseling with chromosome analysis. He concluded with a review of donor types – anonymous, open, ID release and known/directed donor.

Friends and Foes: Threats to Male Reproductive Health – Patients and Physicians

Speakers: Mohit Khera, MD; Joseph Alukal, MD; Craig Niederberger, MD; Cigdem Tanrikut, MD; Scott Eggener, MD; Andy Toledo, MD
Tuesday, May 22, 2012
Reviewer: Joseph W. McQuaid, MD

After introductory remarks, the SSMR meeting opened with a multifaceted reflection on the evolving friends and foes of male reproductive health. Dr. Khera led the session with his look at the increasingly prevalent use of anabolic steroids, which both decrease

intratesticular testosterone levels and inhibit sperm production. While society members agreed that cessation of exogenous steroids results in an eventual restoration of baseline fertility, use of high dose HCG to preserve sperm production in the setting of continued steroid abuse generated active discussion. At this point Dr. Alukal took the podium and examined the effects of smoking, alcohol, marijuana and obesity on male reproductive health. Despite poor data on cessation behaviors, there are demonstrated connections between smoking, marijuana and obesity and abnormal semen analyses. Consequently any patient should be encouraged to make necessary lifestyle changes in conjunction with starting his infertility workup and treatment. A discussion of the internet and its role in patient care and communication by Dr. Niederberger provided a change of pace midway through the session. Despite an exponential increase in electronic versions of print media, physicians continue to struggle with safe and secure methods of answering patients' questions online. Blogging may provide one such way to achieve this.

The second half of the session encouraged heightened attention in considering the reproductive health needs of men taking multiple medications and of those engaged in care with urologic oncologists or reproductive endocrinologists. Dr. Tanrikut reviewed the effects of many commonly prescribed drugs on sexual function, the HPT axis and spermatogenesis. While many of these effects are reversible, urologists should consider working with other specialists to arrange for safer, alternative agents. Sperm banking may be required in patients undergoing chemotherapy. Lastly, Drs. Eggener and Toledo closed discussion by considering the roles that urologic oncologists and reproductive endocrinologists respectively play in men's reproductive health. Testicular cancer patients are routinely identified for sperm banking, however there needs to be a better discussion with prostatectomy patients regarding post-operative sexual function, fertility concerns and possible referrals to fertility experts. This same collaborative, team approach is also needed when interacting with colleagues in reproductive endocrinology. Although management of varicoceles and reversal of vasectomies remain two important areas of disagreement, ultimately the interests of the couple should motivate decisions that are made in determining their care.

Friends and Foes: Threats to Male Reproductive Health – Trauma and Cancer

Speakers: Nancy L. Brackett, PhD; Robert C. Dean, MD; Robert E. Brannigan, MD; Thomas F. Kolon, MD;

John P. Mulhall, MD

Tuesday, May 22, 2012

Reviewer: Aviva E. Weinberg, MD

As part of the SSMR Symposium, entitled "Friends and Foes – Threats to Male Reproductive Health," several notable speakers touched on the unique ways in which spinal cord injury, military trauma and cancer treatments negatively impact male reproductive health.

Nancy Brackett, PhD, highlighted the prevalence of spinal cord injuries in the male population. She described the three main ways in which spinal cord injuries affect male fertility, namely through impaired ejaculatory function, erectile dysfunction and abnormal semen parameters. She outlined the current assistive technologies (penile vibratory stimulation, electro-ejaculation, prostatic massage and surgical sperm retrieval) that have been used in the SCI population. She also stressed the need for best practice policies, to help educate physicians on how to manage the fertility needs of this vulnerable population.

Robert C. Dean, MD, followed with a riveting presentation on the incidence and management of genitourinary trauma in the military theatre. He explained that with the current casualty survivability at nearly 90%, the genitourinary injury rate during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) have increased to over 12%. With this rise in GU trauma, new demands in the area of pelvic protective garments, genitourinary reconstruction, and post-combat management of infertility are being addressed.

Daniel H. Williams, MD, presented Dr. Brannigan's "Update on Male Oncofertility". He highlighted that with increased cancer survivorship, a new focus on cancer's impact on male reproductive health has taken center stage. Unfortunately, male infertility is a common consequence of many of the chemotherapeutic, radiation and surgical modalities used to treat cancer. Despite the publication of ASCO's fertility preservation guidelines in 2006, several studies show there are large knowledge gaps and barriers to implementation of these guidelines in the oncologic community. As such, reproductive specialists are now faced with the challenge of coordinating more formalized oncofertility preservation programs amidst the acuity of cancer care.

Thomas F. Kolon, MD, followed this lecture with a closer look at the current developments in the area of sperm banking and reproductive technologies, which have made it possible to offer fertility preservation to pubertal males undergoing cancer therapy. He stressed that both parents and their teens want information and options early for sperm cryopreservation. Unfortunately, pre-pubertal males still remain a challenge for fertility preservation. However, future investigations in the use of cryopreserved testicular tissue may soon offer alternate solutions to this impasse.

To end the afternoon of presentations, John P. Mulhall, MD, gave us an overview of how MSKCC constructed and implemented an institutional male fertility preservation program. He outlined the key components, namely; institutional support, physician support, and the use of non-physician liaisons, which have made their program a success. His presentation of the MSKCC approach serves as an excellent model for any cancer center seeking a formalized fertility preservation program.

Infertility – Physiology, Pathophysiology, Basic Research Wednesday, May 23, 2012

Reviewer: Jared M. Bieniek, MD

There were a number of excellent abstracts presented in Wednesday morning's infertility basic research podium session. Some of the highlights include Dr. Najari from Cornell who reviewed multiphoton tomography as a potential imaging modality to discern normal spermatogenesis during micro TESE. Baylor researchers Pastuszak and Jorgez outlined the possible roles of GLUT3 and E2F1 gene mutations in infertile men. Specific to men with spinal cord injury, Dr. Ibrahim discussed the role of cytokines and inflammasome pathways in toxic seminal plasma. Research from Mt. Sinai, presented by Dr. Berookhim, demonstrated effective sperm cryopreservation and thawing with a novel media free of animal proteins. In a review of cryopreserved sperm from testis cancer patients, Dr. Lopushnyan noted a reduction in motility with rapid freezing and decreased total motile counts in patients with Stage 3 cancers. Dr. Steele from Virginia presented animal data demonstrating impaired spermatogenesis and Leydig cell hyperplasia with defects in cellular clearance of apoptotic cells. In epidemiologic varicocele analyses, Dr. Soylemez observed an increase in mean platelet volume and Dr. Gokce noted a slightly taller patient height and smaller BMI. Dr. Garcia ended the session with promising data with the use of optoelectric tweezers to select sperm among non-motile populations for use in ICSI.

Infertility – Evaluation
Wednesday, May 23, 2012
Reviewer: Yagil Barazani, MD

The Infertility Evaluation Podium Session 48 included a number of noteworthy presentations. The first of these, from the University of Toronto, highlighted the need for multiple semen samples to make the diagnosis of azoospermia. As one might expect given the significant variability of spermatogenesis, the authors demonstrated that even men with nonobstructive azoospermia may ultimately have sperm on successive semen analyses. In fact, more than 20% of men with an initial diagnosis of azoospermia were noted to have spermatozoa on subsequent specimens, suggesting that at least three and preferably four semen samples should be examined before making the diagnosis of azoospermia. The clinical implication here is enormous; some men otherwise labeled azoospermic may in fact be able to use ejaculated sperm for IVF/ICSI and potentially avoid more invasive procedures such as TESE.

An interesting presentation by Dr. Goldstein and colleagues examined the known modifiable factors linked to impaired semen quality. While the authors evaluated a large number of factors including age, BMI, cigarette use, alcohol consumption, ejaculatory frequency, consumption of caffeinated beverages, self-reported occupational stress, marijuana use, number of hours worked per week, average testis size, serum testosterone, serum FSH and the grade of the largest varicocele, on multivariable models only testis size and FSH were significantly associated with total motile sperm count. However, age, smoking, and drinking were all significantly associated with SCSA, with each 1 year of age shown to increase the DFI by 0.5%, each cigarette shown to increase DFI by 0.5%, and each weekly drink shown to decrease DFI by 0.3%. Moreover, age and drinking were significantly associated with TUNEL. Thus, while no behavioral factors were associated with TMSC, both increasing age and cigarette smoking were independently associated with sperm DNA damage, while alcohol consumption was independently associated with improved sperm DNA integrity. These modifiable factors suggest that the andrologist might have an important role in helping subfertile patients to recognize and change these modifiable factors.

A third study out of Cornell University specifically examined the impact of the revised WHO semen analysis reference limits on selection criteria for microsurgical varicoceles. In this study, the subset of men with clinical grade I – III varicoceles who underwent microsurgical varicocelectomy and whose semen parameters fell between the lower reference limits of the 1999 and 2010 WHO criteria were retrospectively identified. Patients in this group had undergone either unilateral or bilateral varicocele repairs with significant subsequent improvements in both sperm concentration and serum testosterone. Thus, despite the latest WHO criteria, the results clearly demonstrate that even the subset of men with semen parameters that fall between the lower reference limits of the 1999 and 2010 WHO criteria can benefit from improvement in serum testosterone and sperm concentration following varicocelectomy. These findings refute the consideration of the fifth percentile semen reference values as simple cutoffs between “normal” and “abnormal.” Rather, reference ranges should be used in conjunction with appropriate clinical data in the evaluation of infertile men when selecting appropriate patients for microsurgical varicocele repairs.

Dr. Stahl and colleagues from Cornell University shed light regarding the not infrequent discordance among sperm DNA integrity assays

and semen parameters. Specifically, the authors examined the sperm chromatin structure assay (SCSA) and the terminal deoxynucleotide transferase-mediated dUTP nick end-labeling assay (TUNEL). Here the authors identified discordance in 38% of cases, showing that while SCSA DFI and TUNEL are significantly correlated, they are not identical measures of “DNA damage” and as such are frequently discordant. Moreover, SCSA DFI correlated with standard semen parameters while TUNEL did not. Based on this work, it is clear that more studies are required to define the clinical utility and appropriate interpretation of each assay.

Dr. Celigoj and colleagues presented a single center’s experience in achieving ejaculatory success rates by penile vibratory stimulation and electroejaculation in patients with acute spinal cord injury. While it is well known that most men with SCI cannot ejaculate with sexual intercourse or masturbation and require medically assisted ejaculation procedures such as PVS or EEJ to obtain semen for insemination, there are limited reports regarding the success rates of semen retrieval in the acute post-injury setting. To clarify this question, the authors retrospectively examined ejaculation success rates by PVS and EEJ during the first 24 months after SCI. Interestingly, the authors found that PVS was never successful during the first three months post SCI and that success rates after three months continue to improve with time until around 15 months. However, EEJ was noted to be 80% successful even in the acute post-injury setting thus providing a viable option if early PVS fails.

Finally, an intriguing study by Dr. Lipshultz and colleagues at Baylor examined the question of patient choice as it pertains to posthumous sperm utilization in men presenting for sperm banking. While posthumous sperm retrieval (PSR) remains controversial because a living will is frequently absent, guidelines vary from state to state and from one hospital to the next, and a perception persists that men would prefer not to have sperm retrieved after death, the present study sought to elucidate the posthumous reproductive wishes of men by assessing rates of affirmative consent for posthumous sperm use (PSU) in men presenting for sperm banking. Interestingly, most men presenting for sperm banking consented to PSU regardless of their diagnosis, with men in a relationship and non-minors more likely to consent. While this is the first such study to examine the posthumous reproductive wishes of men, it clearly reflects only the wishes of a sub-population of men presenting for sperm banking, and thus may or may not reflect the wishes of those men without the desire to bank sperm. ◀

SSMR Award Winners

Congratulations to the 2012 Belker Fellow: Peter Stahl, MD

Dr. Stahl of New York Presbyterian Hospital/Columbia was the recipient of the Arnold Belker Traveling Fellowship Award and presented the following summaries at the AUA 2012 meeting.



Effects of Smoking, Alcohol Consumption and Age on Semen Quality in Men Evaluated for Subfertility

In this retrospective analysis we utilized uni- and multivariate logistic regression to identify social and behavior factors that affect semen quality. Social and behavior data were collected prospectively by questionnaire for 392 men evaluated for subfertility. Semen quality was assessed with standard semen analysis and sperm DNA integrity testing. Significant associations of smoking and alcohol consumption with semen quality were identified. The number of daily cigarettes was positively correlated with sperm DNA integrity ($p=.002$) on multivariable analysis. SCSA DFI increased by 0.5% and TUNEL increased by 0.3% for each additional daily cigarette. Interestingly, the number of alcoholic drinks consumed weekly was negatively correlated with sperm DNA integrity. SCSA DFI decreased by 0.3% and TUNEL decreased by 0.4% for each additional weekly drink. Age was also independently correlated with DFI ($p=.0003$). We concluded that reduction of smoking and moderate alcohol consumption may be useful behavioral modifications in subfertile men.

Concordance Among Sperm DNA Integrity Assays and Semen Parameters

In this retrospective analysis we analyzed the correlation of two commonly used measures of sperm DNA integrity (TUNEL and SCSA DFI) with each other and with standard semen parameters. We found a moderate positive correlation between SCSA DFI and TUNEL ($r=.36$, $p<.0001$) but the discordance rate between DFI and TUNEL in classifying patients as normal or abnormal was high (45/119, 38%). DFI was negatively correlated with overall % motility ($r = -.48$, $p<.0001$), sperm concentration ($r = -.25$, $p=.005$) and motility grade ($r = -.23$, $p=.014$). TUNEL, on the other hand, was correlated with semen volume ($r = -.19$, $p=.04$) but not with any other semen parameters (see Table). We concluded that DFI and TUNEL are moderately correlated measures of sperm DNA integrity but yield conflicting results in a large percentage of patients. These data indicate that the SCSA and TUNEL assays are not interchangeable. This information is important to clinicians and researchers utilizing sperm DNA integrity testing.

2012 Distinguished Reproductive Urology Award

The SSMR congratulates Dr. Lawrence S. Ross for winning the SSMR Distinguished Reproductive Urology Award. Dr. Ross is pictured with past president Dr. Natan Bar-Chama.



12th Annual SSMR / SMSNA Traveling Fellowship Program

The 12th Annual Traveling Fellowship Program took place in conjunction with the AUA in Atlanta, Georgia, and was a great success. This year was the sixth combined fellowship with the Sexual Medicine Society of North America (SMSNA).

The SSMR would like to express our gratitude to the SMSNA for their academic and financial support of the fellowship. These awards are designed to expose young urology residents to the field of sexual medicine, including male infertility and erectile dysfunction, and allow them to participate in many of the events at the AUA.

2012 Men's Health Fellowship Recipients

Yagil Barazani, MD	Albert Einstein/Beth Israel Med. Ctr.
Jared M. Bieniek, MD	Geisinger Health System
Kelly Chiles, MD	University of Connecticut
James M. Dupree, IV, MD	Northwestern University
Justin Johnson, MD	University of Nebraska
Joseph W. McQuaid, MD	Massachusetts General Hospital
Bobby Najari, MD	Weill Cornell Medical College
Alexander Pastuszak, MD, PhD	Baylor College of Medicine
Devon Snow-Lisy, MD	Cleveland Clinic
Aviva E. Weinberg, MD	Stanford Hospital

Men's Health Traveling Fellowship 2013

Dear SSMR Members:

The Society for the Study of Male Reproduction (SSMR) and the Society for Sexual Medicine of North America (SMSNA) are proud to announce the Thirteenth Annual Traveling Fellowship Program with the SSMR and the sixth combined award for the two societies. This will take place in conjunction with the 2013 AUA meeting in San Diego, California.

The SSMR and SMSNA, AUA-affiliated subspecialty societies, have a mission to promote the advancement of the science and treatment of male reproduction and sexual disorders through education of practitioners, public education, and informational exchange of research and new advances through meetings. The SSMR and SMSNA are committed to cultivating interest in infertility and sexual medicine treatment careers in trainees.

Our goal is to present residents in training with the opportunity, while attending the AUA meeting, to have a more intensive exposure to male infertility and sexual medicine issues. The fellowship program will include mandatory attendance at the SSMR and SMSNA educational programs and complimentary SSMR banquet participation and SMSNA lunch. Fellows will also attend AUA post-graduate courses in male infertility, erectile dysfunction and the infertility podium and poster sessions, as well as a symposium with fellowship directors and faculty members on how to prepare for a future successful career as an andrology specialist. The program will allow significant contact between fellows and leaders in the field.

Preference will be given to those in earlier years of training who do not have a fellowship trained andrologist at their home program. This does not mean, however, that senior residents cannot apply. Their applica-

tions will be considered along with the others. Participants accepted into the program are expected to take part in all components. This means that attendance at the meeting from Saturday through Wednesday afternoon will be required.

Meeting expenses covered by the program may include airfare, hotel accommodations, SSMR and SMSNA meeting and banquet, tuition for the post-graduate course and all special lectures. The maximum stipend will be \$1,000 per fellow. Overages are the responsibility of the fellow or the home institution.

An application is attached, which needs to be completed by the applicant and signed by the director of the training program, assuring commitment from the chief to allow full attendance of the fellowship program, should the applicant be accepted. The applicant should solicit a letter of recommendation from a mentor of his/her choice. **Applications are due by January 11, 2013.** The awards will be announced by February 15, 2013.

We hope you will consider supporting this program through the application of trainees in your program. We look forward to another successful Men's Health Traveling Fellowship!

Sincerely,

Daniel H. Williams, IV, MD
Director of Traveling Fellowship

Kirk C. Lo, MD, FRCSC
SSMR

Andrew C. Kramer, MD
SMS

Nelson Bennett, Jr., MD
SMS

Application for the Men's Health Traveling Fellowship Program 2013

Saturday, May 4 – Wednesday, May 8, 2013
San Diego, California

Please print or type.

Name: _____ Degree(s): _____

Work Address: _____

City: _____ State: _____ Zip: _____

Home Address: _____

City: _____ State: _____ Zip: _____

Work Phone: _____ Home Phone: _____ Fax: _____

E-mail: _____

Current Position (Resident / PGY Year, Post-Doc): _____

Institution / Department: _____

Please attach the following:

1. Curriculum vitae
2. Personal statement (1 page or less)
3. Letter of recommendation from chairman or selected mentor

Signature of Applicant: _____

Chairman Signature: By signing below, I am supporting the application of the above-named member of our department as a traveling fellow of the SSMR and SMSNA. I understand that attendance at the AUA meeting will be subsidized by the award to a maximum of \$1,000, and that attendance of the fellow at all traveling fellowship functions is expected. Saturday morning through Wednesday evening at a minimum.

Signature of Department Chairman: _____

Send completed applications to:

SSMR/SMS Traveling Fellowship
Two Woodfield Lake
1100 E Woodfield Road, Suite 520
Schaumburg, IL 60173

Deadline: January 11, 2013



Mark Your Calendars

Online Voting for SSMR Leadership

From February 15 – April 15, 2013, you will be able to vote for the 2013 – 2014 open SSMR leadership positions online at www.ssmr.org.

Exercise your RIGHT TO VOTE!

2013 SSMR Program

“Male Infertility as a Barometer of Men’s Health”

Paul R. Shin, MD, Program Chair

Dear Fellow SSMR members,

As program chair for the 2013 SSMR meeting in San Diego, CA, I am pleased and excited to announce our program. We have begun to lay the foundation for and recruit a great panel of speakers to address the topic of “Male Infertility as a Barometer of Men’s Health.”

As fertility-focused urologists, we are in a somewhat unique position to evaluate and treat significant men’s health concerns at a very early stage. As we all know, infertility can be the proverbial tip of the iceberg regarding a man’s overall health concerns. All too often, however, our focus on the patient ends with the resolution of his fertility concerns.

We will be exploring a wide variety of topics concerning male fertility and its potential impact on men’s health. From an endocrine perspective, issues such as hypogonadism and metabolic syndrome as well as the implications of short-term and long-term testosterone replacement will be examined. The link between varicoceles and hypogonadism will also be more fully characterized. Additionally, male factor fertility and other associated health concerns such as prospective oncologic concerns and cardiovascular disease will be featured.

Long-term quality of life issues such as sexual dysfunction and other mental health disorders such as depression and anxiety as a result of fertility related problems will also be prominently featured. An update on the close partnership between SSMR leadership and the CDC Men’s Health Project will also be provided.

Our care of the infertile man does not simply end with infertility treatments. The educational goals of this program are to examine the risks that infertile men may face as they age as well as to educate urologists regarding early intervention.

ASRM Annual Meeting

October 20 – 24, 2012

San Diego Convention Center

San Diego, California

Testis Workshop

April 10 – 13, 2013

ASA 38th Annual Conference

April 13 – 16, 2013

Hyatt Regency San Antonio

San Antonio, Texas

Andrology Lab Workshop

April 13 – 14, 2013

ASA Special Symposium

April 13, 2013

AUA 2013 Annual Meeting

May 4 – 9, 2013

San Diego, California

SSMR Annual Meeting at the AUA Annual Meeting

Tuesday, May 7, 2013

San Diego, California

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The Society for the Study of Male Reproduction (SSMR) encourages organizations and individuals to link to www.ssmr.org.

Society for the Study of Male Reproduction

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