



Editor - Moshe Wald, MD

SMRU Newsletter

Spring 2009



Mission Statement

“To promote the advancement of our understanding of male reproductive physiology and management of male infertility by providing a forum for the dissemination of both basic and clinical research information and support of educational programs.”

MESSAGE FROM THE PRESIDENT

ROBERT BRANNIGAN, MD

Greetings, fellow SMRU Members.

It is my pleasure to welcome you to the Spring issue of the SMRU newsletter. Two-thousand and eight was an outstanding year for our organization; and we look forward to continued success in 2009. I am sure I echo the sentiments of other SMRU members in observing that our meeting this past November in San Francisco was fantastic. The scientific and educational programs were brimming with novel insights and innovative reports; and several of those sessions will be highlighted in this issue of the newsletter. The social program was also very enjoyable, providing old friends valuable time to catch up, and new acquaintances an opportunity to forge friendships.



I would like to personally welcome our new SMRU Board members and thank those who continue in their service. They are Nancy Brackett, PhD, who is our new President-Elect, and Edward D. Kim, MD, who was elected to the position of Secretary/Treasurer. Jay Sandlow, MD, is now our Past-President. Paul J. Turek, MD is our new Member-at-Large, joining Gail Prins, PhD and Natan Bar-Chama, MD. Erma Drobnis, PhD is our new Membership Chair, and we are eager for her leadership and efforts in broadening

the ranks of our membership. Susan Benoff, PhD continues her tireless work as Chair of the SMRU Traveling Scholars Program. Finally, Moshe Wald, MD has done outstanding work keeping us all updated as our SMRU Newsletter Editor.

We recently returned from the ASRM Board of Directors meeting in Charleston, SC; and I am pleased to report that the ASRM is doing very well. The SMRU is well represented on the ASRM Board, highlighting the fact that SMRU members share in the important responsibility of leading the ASRM. Dale McClure, MD is doing an outstanding job as current ASRM President. Rebecca Sokol, MD, MPH serves as an ASRM Director-at-Large, and Nancy Brackett, PhD joins me in representing the SMRU on the ASRM Board. Stuart Howards, MD is Treasurer of the ASRM Board of Directors; and he has done a great job in helping to navigate the ASRM through these challenging economic times. I would like to congratulate and thank all of the above individuals for their involvement and commitment to the leadership of the ASRM. Finally, I would like to congratulate and encourage you to support Dorrie Lamb, PhD, as she was recently nominated for the position of ASRM Vice President.

Planning is well underway for the 2009 Annual Meeting. The SMRU postgraduate course is being

(continued on page 2)

IN THIS ISSUE

SMRU Board and Officerspage 2	SMRU Minisymposia Summarization.....page 11
SMRU Traveling Scholars 2007.....page 3	ASA Presentation.....page 12
SMRU Abstract Summariespages 4 - 5	SMRU Member Profilepage 12
MRU Podium Session Summarizationpages 6 - 7	“Did You Know?”.....page 13
Member Update - Sijo J. Parekattil, M.D.page 8	SMRU Member Update.....page 13
MRU Abstract Summaries	SMRU Benefits of Membershippage 14
Traveling Scholars Session.....pages 9 - 10	SMRU Application for Membership.....page 15
	SMRU Fund Raiser.....page 16

(continued from page 1)

chaired by Nancy Brackett, PhD, and is entitled, "Male Reproduction in 2009: New Clinical and Scientific Paradigms". Faculty will include Trevor Cooper, PhD, Dolores Lamb, PhD, and Dana Ohl, MD.

The interactive session entitled, "Treatment of Male Testosterone Deficiency During and After the Reproductive Years" is being chaired by Abe Morgentaler, MD and co-presented by Larry Lipshultz, MD. Three mini-symposia are scheduled, including "Testosterone and Cardiovascular Disease: The Chicken or the Egg?" by Edward Kim, MD; "Future Directions in Andrology Training" by Joel Marmar, MD, and "Gender Differences in the Impact of Environmental Toxins on Reproductive Health" by Susan Benoff, PhD. Finally, the Bruce Stewart Lecture will be presented by Bob Oates, MD, and is entitled, "The Genetics of Male Infertility".

We are grateful for the outstanding assistance provided by Ms. Jil Clowers to the SMRU over the last several years. Jil has helped on numerous projects, including SMRU member recruitment, newsletters, and meeting logistics. Thank you, Jil! We are delighted to welcome Ms. Susanna Scarbrough, our new SMRU liaison, as she will be assuming Jil's duties. I want to personally thank Ms. Angelia Pitman and the

ASRM for their assistance in the SMRU website renovation, which is currently underway. We look for the new website to have enhanced navigation features, with easier access to valuable SMRU and ASRM content, as well as an updated overall appearance.

In closing, The SMRU Traveling Scholars Donor Fund was initiated two years ago by Rebecca Sokol, MD, MPH and promoted again last year by Jay Sandlow, MD. This fund has helped to support the attendance of promising, motivated young scholars at the ASRM meeting each year since its inception. I would encourage each of you to consider supporting this very worthwhile program. I encounter former Traveling Scholars on a regular basis at scientific meetings throughout the year; and they routinely go out of their way to stress how beneficial this program has been to their career development. Now more than ever, I encourage you to consider supporting this very important fund. Details are enclosed inside this newsletter.

Thank you for your continued support of the SMRU.

SMRU BOARD AND OFFICERS 2008-2009

President
Robert E. Brannigan, MD

Past President
Jay I. Sandlow, MD

Board: 3 Year Term
Paul J. Turek, MD

President-Elect
Nancy L. Brackett, PhD

Board: 1 Year Term
Natan Bar-Chama, MD

Newsletter Editor
Moshe Wald, MD

Secretary/Treasurer
Edward Kim, MD

Board: 2 Year Term
Gail S. Prins, PhD

Traveling Scholars Committee Chair
Susan Benoff, PhD

ANNUAL MEETINGS OF THE AMERICAN SOCIETY FOR REPRODUCTIVE MEDICINE (ASRM)

OCTOBER 17-21, 2009
GEORGIA WORLD CONGRESS CENTER
ATLANTA, GEORGIA

OCTOBER 23-27, 2010
THE COLORADO CONVENTION
CENTER
DENVER, COLORADO

OCTOBER 15-19, 2011
THE ORANGE COUNTY
CONVENTION CENTER
ORLANDO, FLORIDA

OCTOBER 20-24, 2012
SAN DIEGO CONVENTION CENTER
SAN DIEGO, CALIFORNIA

SUPPORT the SMRU Traveling Scholars!

Rebecca Sokol, MD

The objective of the SMRU Traveling Scholars program is to expose the selected scholars to new scientific information pertinent to the study of male reproductive medicine. The Scholars, who are selected based on the quality of their submitted research abstracts and their letters of recommendations, are given the opportunity to present their research findings at a special session during the Annual Meeting.

Last year, the SMRU Board began a campaign to endow the SMRU Traveling Scholars Program. As you know, every year the SMRU sponsors a group of bright young fellows/residents, graduate students, and post-doctoral fellows at the ASRM Annual Meeting.

Your gifts allow award recipients to receive a stipend to offset the costs of attending the meeting.

WE SUGGESTED A MINIMUM DONATION OF \$250, BUT ALL DONATIONS WERE APPRECIATED. We would like to acknowledge those SMRU members who have donated to the fund and are listed below, and invite the rest of you to send a donation in support of this important program. Please go to www.smru.org,

click on DONATE to SMRU and indicate that your donation is for the SMRU Scholars Program. Alternatively, send a check to ASRM/SMRU c/o Susanna Scarbrough at 1209 Montgomery Highway, Birmingham, AL 35216-2808.

Nancy Brackett, PhD	Peter Schlegel, MD
Robert Brannigan, MD	Arnold Belker, MD
Dale McClure, MD	Stuart Howards, MD
Dolores Lamb, PhD	Gabor Huszar, MD
Charles Lynne, MD	Edward Kim, MD
Natan Bar-Chama, MD	Mark Licht, MD
Craig Niederberger, MD	Larry Lipshultz, MD
Robert Oates, MD	Mark Sigmon, MD
Jay Sandlow, MD	Marc Goldstein, MD
Richard J. Sherins, MD	Rebecca Sokol, MD

SMRU would also like to acknowledge the untiring work of Dr. Susan Benoff in working with the Traveling Scholars Program over the years.

2008 SMRU Traveling Scholars

Amul M. Shah

Final Results Of The Survey For Preservation Of Adolescent Reproduction (Spare) Study: Semen Preservation Knowledge, Attitudes, Practices And Barriers

Kathleen Lin, MD

Sertoli Cell-Only Pattern (Sco) Does Not Always Cause Elevated Fsh: Impact On Sperm Retrieval Results In Non-Obstructive Azoospermia (NOA)

Rene B. Allen, MD

Hyperglycosylated Human Chorionic Gonadotropin (Hhcg): A Novel Finding In Seminal Plasma

Genevieve Patry, MD

MAP: Micro-Testicular Sperm Extraction Avoidance Program

Oral Abstract Presentation Session, Monday, November 10, 2008

Summarized by Harris Nagler, MD

[O-8] The Use of Biased Language and Inaccurate Information about Male Factor Infertility on Fertility Clinic Websites in the United States

D.H. Williams, IV, JD Nelson. Urology, University of Wisconsin, Madison, WI

SMRU Prize Paper

The purpose of this study was to evaluate male factor infertility (MFI) content on fertility clinic websites in the United States. The authors queried the Society for Assisted Reproductive Technology registry in July 2007 and obtained a list of 396 clinics performing IVF/ICSI. Websites were assessed for:

1. academic or private practice
2. whether or not male factor infertility was mentioned
3. whether or not a urologist was part of the fertility team
4. if there were links to the urologist on the webpage

Discussion of vasectomy reversal, presence of inaccurate information, and use of biased language were noted. Language was considered biased if it could potentially dissuade a couple from seeking a male factor infertility evaluation or treatment. Overall, 58% of websites mentioned MFI. Only 7.4% of clinics included a urologist as part of their treatment team. 13.4% of websites contained inaccurate information. There were inaccuracies or prejudicial information which may direct patients to ART rather than specific male factor treatment. The authors point out that this should be viewed as an opportunity for increased involvement by the urologic community with these clinics and improved accuracy and quality of information.

Editorial Comments

It should be noted that this was a prize-winning paper, not because of the "science" but because it documents an important flaw in how and what we communicate to patients. The in vitro fertilization "industry" has a bias that directs patients into IVF cycles. It is incumbent upon urologists to be certain that patients have access to good quality information. It was interesting to note that there was not a significant difference in the quality of information presented by academic medical center IVF programs and private practice facilities.

[O-10] Sperm DNA Damage: Correlation to Severity of Semen Abnormalities

S.I. Moskovtsev, J. Willis, J. White, J. White, J.B.M. Mullen. Department of Pathology and Laboratory Medicine, Mount Sinai Hospital, Toronto, ON, Canada; Mount Sinai Hospital, Toronto, Canada.

Evaluation of male fertility includes assessment of the standard semen parameters (SSP) and may include assessment of DNA damage. However, the relationship between DNA damage and SSP remains controversial. This study examined the relationship of DNA damage to SSP in patients presenting for infertility evaluation. The authors conducted an IRB-approved retrospective review of semen samples from 2,586 unselected non-azoospermic patients who underwent computer-assisted semen analysis and flow cytometry based sperm DNA damage assessment expressed as the DNA fragmentation index (DFI). DFI was significantly negatively correlated to sperm concentration, motility, and normal morphology and positively correlated to age ($p < 0.001$). DNA damage increased in rela-

tionship to the number of abnormalities in the SSP ($p < 0.001$). The authors concluded:

1. DNA damage is significantly related to standard parameters of semen analysis
2. DNA damage is significantly related to age
3. degree of DNA damage increases with the number of abnormal parameters in a sample and is most severe in patients with OAT

Editorial Comment

The authors demonstrate the relationship between progressively more abnormal semen parameters and abnormal DFI. This is consistent with clinical observations and does not appear to demonstrate any incremental value to DFI assessment in clinical practice in the initial assessment of the infertile male.

[O-13] Is Socioeconomic Status Associated with Higher Infertility Costs? An Analysis of the Interaction Between Education and Income on Total Cost Among Infertile Couples Followed for 18 Months

J.F. Smith, D. Glidden, T.J. Walsh, L.A. Pasch, M.I. Cedars, P.P. Katz. Urology, University of California, San Francisco, San Francisco, CA; Epidemiology and Biostatistics, University of California, San Francisco, San Francisco; Psychiatry, University of California, San Francisco, San Francisco; Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco, San Francisco; Medicine, University of California, San Francisco, San Francisco.

This study was designed to assess the utilization of reproductive services by individuals of different socioeconomic and educational groups. A prospective cohort of 369 couples were followed for 18 months. The infertility cohort was assembled from 8 community and academic reproductive endocrinology clinics, also followed for 18 months. Interviews were conducted at enrollment and at 4, 10, and 18 months. Multivariable linear regression was used to model the relationship between socioeconomic status and total cost of infertility care by assigning standard costs to medication, procedures, etc. Fertility outcomes and key demographic and medical data were determined through interviews and medical record abstraction. The mean cost of infertility care was \$14,500. Couples with an annual household income $> \$100,000$ had a total cost \$4,700 more than couples with an income $< \$100,000$. Couples with at least a college degree had similar increased costs as compared to those without a college education. Infertility costs were \$5,900 more for high-earning couples with a college degree relative to low-earning couples with a college degree. Thus, couples with at least a college education or a larger household income had higher infertility costs.

Editorial Comment

This study codifies what most would expect. The access to treatment and the utilization is affected by education and resources. The types of treatments employed are also affected by financial and time considerations. This is a powerful study with societal implications. The same study should be performed in states with mandated infertility services and IVF services.

Tuesday November 11, 2008
Male Reproduction and Urology Podium Session
Summarized by Victor Brugh, MD

[O-173] GPR30: A Novel Estrogen Receptor Plays Critical Role in Testicular Function and Steroidogenesis in Rodents and Humans.

L. Vaucher, A. Mielnik, D.A. Paduch. Department of Urology, Weill Medical College of Cornell University, New York, NY; Population Council, Rockefeller University, New York, NY

Dr. Vaucher and the Cornell group started the session with a discussion of the estrogen receptor GPR30. Using a rodent model and the GPR30 specific ligand G1, GPR30 is described as an alternative to classic ER signaling in the testis. Selective and nonselective activation of GPR30 lead to a decrease in testosterone production. Unlike GPR30, classic ER plays a minimal role in the effect of estradiol on steroidogenesis within the testis. Blocking GPR30 transduction cancels G1 affect in rodents and GPR30 may have a key role in the response to estradiol in the human testis.

[O-174] Epidemiologic Characteristics of Men Evaluated for Infertility in a Large, Pre-paid Insurance Plan.

T.J. Walsh, S.L. Feigenbaum, J.F. Smith, M.S. Croughan, S.K. VanDenEeden. Urology, University of California, San Francisco, San Francisco, CA; Obstetrics and Gynecology, REI, Kaiser Permanente, San Francisco, CA; Obstetrics, Gynecology, and Reproductive Sciences, University of California, San Francisco, San Francisco, CA; Division of Research, Kaiser Permanente, Oakland, CA

Dr. Walsh reviewed the epidemiologic characteristics of men obtaining a fertility evaluation in the Kaiser health care plan. The group's goals were to identify and characterize men undergoing fertility evaluation. There was a higher proportion of African-American males with abnormal semen parameters, and abnormalities increased with increasing male age.

Characteristics of 29,067 Men Evaluated by Semen Analysis, 2002-2007

Characteristic	All Men Evaluated (N)	Normal Semen Parameters (n)	Abnormal Semen Parameters (%)		
Age (years)				n	%
<20	75	35	47	40	53
20-44	25747	16793	66	8774	34
45-49	2041	1148	56	893	44
50-54	789	374	47	415	53
60+	150	44	29	106	71
Total	29067	18692	64	10395	36
Race/Ethnicity					
White	6031	3793	63	2238	37
Black	762	381	51	371	49
Asian	2146	1311	61	835	39
Hispanic	1475	909	62	566	38
Other	493	298	60	195	40
Unknown	18170	11980	66	6190	34
Total	29067	18692	64	10393	36

[O-175] The characterization and function of male germline stem cells obtained from human testicular tissue.

H. Kobayashi, K. Nagao, H. Hara, K. Miura, N. Ishii. Department of Urology, Toho University, School of Medicine, Tokyo, Japan; Toho University, School of Medicine, Tokyo, Japan

Dr. Kobayashi reported on Thy-1, a glycosyl phosphatidylinositol-anchored surface antigen in the rat testis, as a potential marker for human spermatogonial stem cells. Magnetic microbeads were used to sort for Thy-1+ cells from human testicular cell suspensions, though Thy-1 cells were identified among the non-retained cell suspensions as well. Thy1+ cells did express embryonic stem cell genes, yet they did not exhibit pluripotency as teratomas were not formed when these cells were transplanted into nude mice.

[O-176] Ghrelin and Leptin Influence Differential Gene Expression in the Post-Pubertal Murine Sertoli Cell

J.P. Alukal, M. Louet, S. Whirledge, Y. Sun, R.G. Smith, D.J. Lamb. Scott Department of Urology, Baylor College of Medicine, Houston, TX; Molecular and Cell Biology, Baylor College of Medicine, Houston, TX; Huffington Center on Aging, Baylor College of Medicine, Houston, TX

Dr. Alukal described how ghrelin and leptin alter gene expression in the post-pubertal murine Sertoli cell. Ghrelin is the endogenous ligand to the growth hormone secretagogue receptor and leptin is its physiologic antagonist. Leptin causes decreased appetite and weight and ghrelin increases appetite and weight. Leptin knockout mice are obese and infertile, though combined leptin and ghrelin knockout mice are fertile. Interestingly, leptin and ghrelin knockout mice have testosterone levels which are lower than control mice. In conclusion, leptin and ghrelin are involved in androgen independent regulation of spermatogenesis.

[O-177] Endogenous Tachykinins and Neprilysin Modulate Human Sperm Motility

C. González-Ravina, F.M. Pinto, M. Fernández-Sánchez, L. Candenás. Laboratory of Andrology, IVI Sevilla, Sevilla, Spain; Instituto de Investigaciones Químicas, CSIC-US, Sevilla, Spain; Gynecologist, IVI Sevilla, Sevilla, Spain

Dr. González-Ravina reviewed how tachykinin substance SP (SP) and neprilysin (NP) modulate sperm motility. Using fresh ejaculated specimens, sperm were first capacitated then analysed for mRNA of SP and NP using RT-PCR. Genes encoding SP and NP are expressed in sperm. Phosphoramidon, a highly selective inhibitor of neprilysin causes an increase in sperm motility; and using a tachykinin receptor selective antagonist, that effect is muted. These findings prove neprilysin plays a role in sperm motility likely due to a modulation in the metabolism of endogenous tachykinins.

[O-178] The Use of Immunofluorescence in Microdissection Testicular Sperm Extraction (TESE).

J.R. Greenhalgh, T.S. Griffith, M. Wald. Urology, University of Iowa Hospitals and Clinics, Iowa City, IA

Using mouse testes and an immunofluorescent marker, Dr. Greenhalgh reported on a novel technique which identifies sperm during microTESE. Using testes from both sterile and fertile mice, an immunofluorescent marker (fluorescein isothiocyanate [FITC]-conjugated mouse anti-Human acrosomal IgM antibody (HS-14)) was injected directly into the seminiferous tubules. A Bio-Rad Multiphoton microscope was used to identify sperm which were successfully labeled within the fertile mice seminiferous tubules. In the sterile mice testes no immunofluorescence was identified, confirming that an immunofluorescent technique is feasible and may assist in successful identification of sperm during microTESE.

Member Update
Calling for Chronic Orchalgia!
Sijo J. Parekattil, M.D.
University of Florida, Gainesville, FL.

Levine et al. have shown that microsurgical denervation of the spermatic cord (MDSC) can treat select patients with chronic testicular pain.¹ Recent work suggests that robotic assistance may provide technical advantages in microsurgery.^{2,3} We have developed a specialized multi-disciplinary testicular pain clinic and are evaluating the potential benefits, if any, in developing a robotic-assisted microsurgical approach for the denervation of the spermatic cord (RMDSC).

An initial prospective, randomized trial in a canine model comparing RMDSC to MDSC reveals a significantly decreased operative duration using robotic assistance ($p=0.04$). Our initial 10 human RMDSC cases were completed successfully and 80% of these chronic testicular pain patients have had complete resolution of their pain (by validated pain questionnaires). The preliminary results appear promising. However, longer follow-up and further evaluation are needed. This study is open for patients with chronic testicular pain of greater than 6 months' duration, failed conservative treatments, and a negative urologic and neurologic workup. If you know of any patients that may be interested in participating, please free to contact me at: sijo.parekattil@urology.ufl.edu or call 352-273-6815.

References

1. Levine LA. Microsurgical denervation of the spermatic cord. *J Sex Med* 5: 526, 2008.
2. Kuang W, Shin PR, Oder M et al. Robotic-assisted vasovasostomy: a two-layer technique in an animal model. *Urology* 65: 811, 2005.
3. Schiff J, Li PS, Goldstein M. Robotic microsurgical vasovasostomy and vasoepididymostomy: a prospective randomized study in a rat model. *J Urol* 171: 1720, 2004.

MOVING?

Be sure and send your
new contact information,
including email address to:

Susanna Scarbrough
ASRM
1209 Montgomery Highway
Birmingham, AL 35216

**Presentations Made at the Male Reproduction and Urology
Traveling Scholars Oral Presentation Session
Wednesday, November 12, 2008
Summarized by Stanton Honig, MD**

Amul M. Shah*
**Final Results Of The Survey For Preservation Of Adolescent Reproduction (Spare) Study:
Semen Preservation Knowledge, Attitudes, Practices And Barriers**

[O-264] Final Results of the Survey for Preservation of Adolescent Reproduction (SPARE) Study: Semen Preservation Knowledge, Attitudes, Practices and Barriers.

A.M. Shah, T.S. Kohler, L.A. Kondapalli, S. Chan, T.K. Woodruff, R. Brannigan. Department of Urology, Northwestern University, Chicago, IL; Department of Obstetrics & Gynecology, Northwestern University, Evanston, IL

Dr. Shah and colleagues reported results of a questionnaire-based assessment of adolescent health care providers regarding fertility preservation. The questionnaire was a web-based 19-item survey asking about semen preservation knowledge, attitudes, practices and barriers. 209 respondent questionnaires were obtained, including 181 pediatric oncologists. 85% offered sperm banking to pubertal patients within one week of diagnosis. Thoughts about estimated cost for cryopreservation of sperm ranged from \$100-500,000. In the event of death, 46% recommended that banked sperm be thawed and destroyed, 37% recommend it be given to parents and 23% recommend donating the sperm to a research facility. The most likely reason not to recommend cryopreservation was a patient having a poor survival prognosis or an aggressive disease requiring immediate initiation of treatment. This study was supported by the Oncofertility Consortium, NIH grant.

Rene B. Allen, MD*
Hyperglycosylated Human Chorionic Gonadotropin (Hhcg): A Novel Finding In Seminal Plasma

[O-266] Hyperglycosylated Human Chorionic Gonadotropin (HhCG): A Novel Finding in Seminal Plasma. R.B. Allen, A. Li, M.F. Landay, F.Z. Stanczyk, R.J. Paulson, R.Z. Sokol. Obstetrics and Gynecology, USC Keck School of Medicine, Los Angeles, CA

The authors evaluated levels of hyperglycosylated hCG (HhCG) in seminal plasma. They evaluated semen of normal men for HhCG levels. There was an inverse correlation between the HhCG level and both the ratio of hCGR mRNA and sperm concentration. The authors report for the first time HhCG being present in seminal plasma. The relationship between HhCG and expression of the hCG receptor may be important in spermatogenesis.

Genevieve Patry, MD*
MAP: Micro-Testicular Sperm Extraction Avoidance Program

[O-268] MAP: Micro-testicular Sperm Extraction Avoidance Program
G. Patry, K. Jarvi, E.D. Grober, K.C. Lo, L. Spencer. Urology Division, Mount Sinai Hospital, University of Toronto, Toronto, ON, Canada; University of Toronto, Toronto, Canada

Dr. Patry et al reported on the possibility of finding sperm in the ejaculate of patients with non-obstructive azoospermia (NOA). Patients with NOA were asked to give multiple semen samples prior to ICSI. 17 patients with azoospermia were included in the study. 29% (5/17) had motile sperm in their ejaculate at some point prior to ICSI that could be cryopreserved and used for ICSI. An average of 3 samples were given per patient. Of note, some of these patients had intermittent azoospermia- in fact 80% of those who were able to cryopreserve had some sperm at some time in the ejaculate. The authors recommend more than 2 semen analyses to see if sperm can be frozen for ICSI (on average, 3 specimens) to potentially spare the patient a TESE procedure.

*** denotes an SMRU Traveling Scholar**

Kathleen Lin, MD*

Sertoli Cell-Only Pattern (SCO) Does Not Always Cause Elevated Fsh: Impact On Sperm Retrieval Results In Non-Obstructive Azoospermia (NOA)

[O-265] Sertoli Cell-only Pattern (SCO) Does Not Always Cause Elevated FSH: Impact on Sperm Retrieval Results in Non-obstructive Azoospermia (NOA).

K. Lin, M.D. Sammel, R. Ramaswamy, P.N. Schlegel. Reproductive Endocrinology & Infertility, University of Pennsylvania, Philadelphia, PA; Department of Biostatistics and Epidemiology, University of Pennsylvania School of Medicine, Philadelphia, PA; Urology, NYPH-Weill Medical College of Cornell University, New York, NY

These authors evaluated predictors of successful sperm retrieval by microTESE in patients with non-obstructive azoospermia and Sertoli cell only. 373 patients with sertoli cell only were evaluated. MicroTESE was successful in 45% of patients with Sertoli cell only. Interestingly, patients with small testes and high FSH had a higher sperm retrieval rate in this subgroup. Pregnancy rates were about 50% if sperm was found.

* denotes an SMRU Traveling Scholar

Andrew Nisbet, MD

Changes in Prostate Specific Antigen (PSA) with Clomiphine Citrate: Preliminary Data on Infertile Hypogonadal Men Presented by Stan Honig, MD

[O-267] Changes in Prostate Specific Antigen (PSA) with Clomiphine Citrate: Preliminary Data on Infertile Hypogonadal Men.

A. Nisbet, S. Honig. Urology, University of Connecticut, Farmington, CT; Urology Center, New Haven, CT

Drs. Nisbet and Honig evaluated the effects of clomiphene citrate on infertile hypogonadal men. 24 men were followed for an average of 5 months. Hormone and PSA levels were recorded on all patients post-therapy. There was no difference in PSA levels after clomiphene citrate therapy and all PSAs were less than 2.0 ng/ml. Preliminary data suggest that with increasing testosterone and FSH levels, clomiphene citrate does NOT increase PSA levels in the short term.

Sue Hammoud, MD

Genome-wide Epigenetic Characterization of Human Sperm Reveals Distinctive Chromatin States that Poise Genes to Guide Embryo Development

[O-263] Genome-wide Epigenetic Characterization of Human Sperm Reveals Distinctive Chromatin States that Poise Genes to Guide Embryo Development.

S. Hammoud, D. Nix, H. Zhang, J. Purwar, B. Cairns, D.T. Carrell. University of Utah, SLC

These authors reported basic science research results on genome-wide DNA methylation, localization and characterization of histones retained in the paternal genome of fertile males. Sperm from fertile donors was utilized for histone/protamine localization of chromatin. Promoters enriched with histone are deficient in DNA methylation in sperm and acquire selective DNA methylation in differentiated cells. High levels of H3K4me3 are present at a few genes of importance in embryonic development. The human sperm epigenome will evaluate spermatogenesis and embryonic developments and totipotent differentiation.

Visit the SMRU web site at
www.smru.org

Sperm Biochemical Markers and Their Relationship to Sperm Morphology
SMRU Minisymposium by Gabor Huszar, MD,
Wednesday, November 13, 2008
Summarized by Natan Bar-Chama, MD

Accurate parameters assessing sperm quality and predicting fertility outcomes continues to challenge the field of reproductive medicine. This lecture highlighted this challenge and focused on the scientific literature associated with the HA (Hyaluronic Assay). The basis for this assay is that as sperm mature, the cytoplasm is extruded and the sperm membrane acquires through remodeling the formation of sperm zona pellucida and hyaluronic acid (HA) binding sites. Therefore, the ability of sperm to bind exogenously to HA is an indicator of sperm maturation and fertilization potential. Immature human sperm are noted for the presence of excess cytoplasmic material and the lack of the maturity marker galactosyl transferase, have diminished ability to bind to the zona pellucida or to HA and demonstrate a higher concentration of abnormal morphology. The opposite is also true; whereby sperm that are able to bind to HA are more mature and lack cytoplasmic retention, excess persistent histones, apoptotic processes, DNA chain fragmentation, and show a normal frequency of chromosomal aneuploidies. The speaker presented in detail data from an upcoming publication demonstrating that when compared to unprocessed sperm, the sperm fraction isolated following binding in vitro to HA demonstrate a 3.04x fold increase in normal strict kruger morphology (which is similar to the 4.2x increase noted when a sperm fraction is selected based on in-vitro binding to human zona pelucida.) The author concluded that the sperm-HA binding assay may offer an advantageous test in addition to sperm morphology that reflects normal sperm development and indicates maturational events that affect DNA integrity and aneuploidy frequency and may therefore be a useful diagnostic tool in the evaluation of the infertile male especially if the couple are proceeding with assisted reproductive technologies.

WE ARE PLEASED TO ACKNOWLEDGE THE FOLLOWING SMRU MEMBERS FOR THEIR VALUABLE SERVICE AS REPRESENTATIVES TO THE BELOW ASRM COMMITTEES:

CODING AND REIMBURSEMENT COMMITTEE

AARON SPITZ, MD (2008-2011)

MEMBERSHIP COMMITTEE

ERMA Z. DROBNIS, PhD (2008-2011)

CONTINUING MEDICAL EDUCATION COMMITTEE

MARK SIGMAN, MD (2007-2010)

PATIENT EDUCATION

EDMUND S. SABANEKH, Jr., MD (2008 - 2011)

PRACTICE COMMITTEE

MARK R. LICHT, MD (2006-2009)

RESIDENT EDUCATION

PAUL J. TUREK, MD (2006-2009)

2009 SMRU TRAVELING SCHOLAR AWARD PROGRAM COMMITTEE

SUSAN BENOFF, PhD (CHAIR)

ROBERT BRANNIGAN, MD

Obstructive Interval Should Not Be a Deterrent in Vasectomy Reversal

S.H.F. Marks, P.J. Burrows, A.R. Cropp, R.L. Ax, T.C. McCauley. International Center for Vasectomy Reversal, Tucson, AZ; TMI Laboratories International Inc., Tucson, AZ

Presented at:

American Society of Andrology 33rd Annual Meeting, Albuquerque, New Mexico, April 12-15, 2008

Published criteria predicting successful vasectomy reversal based on obstructive interval are inconclusive. Obstructive interval is often emphasized as a contributing factor predicting successful vasectomy reversal. The purpose of this study was to conduct a retrospective analysis of records from 1,221 subjects spanning eight years that underwent surgery at a specialized vasectomy reversal clinic. Data included obstruction interval, intraoperative presence or absence of vasal sperm, surgical method (VV: vasovasostomy or VE: vasoepididymostomy) and patency based on follow-up semen analyses. To assess the effect of obstructive interval on patency, subjects were split into two groups based on number of years since vasectomy: <15 yr (mean = 7.2 (range 0-14); and ≥15 yr (mean = 19.9 (range 15-42)). Patency was established as return of motile sperm in the ejaculate following vasectomy reversal. Patency did not differ statistically between subjects in the two groups: 92% (805/875) vs. 89% (165/185) for <15 yr and ≥15 yr, respectively. The relationship between presence or absence of vasal sperm and type of surgical procedure required was explored. In the <15 yr group, vasal sperm was detected 88% (364/413) of the time compared to 74% (81/109) of the time in the ≥15 year group. Bilateral vasovasostomy was performed 80% of the time in the <15 yr group (n=1,008) compared to 55% of the time in the ≥15 year group (n=213). A higher (P<0.001) percentage of patients in the ≥15 yr group received bilateral VE; however, this did not lower overall patency following reversal. In conclusion, these data indicate that obstructive interval alone is not a predictor of patency following a vasectomy reversal; but rather, the intraoperative finding of sperm is indicated to determine the correct site of reconnection.

Member Profile - Dr. Peter Burrows



Dr. Burrows has served as director of the Arizona Andrology Lab and Cryobank in sunny Tucson, Arizona, since 2002. In addition to his urology practice, Dr. Burrows holds faculty appointment at the University of Arizona where he enjoys teaching residents the pearls of male infertility and andrology.

Dr. Burrows grew up in Los Angeles and completed his urology residency at USC. He then became a fellow for Dr. Larry Lipshultz at Baylor, where he focused on clinical research and was lead author for the Urology Clinics of North America's updated Office Evaluation of the Infertile Male. Dr. Burrows then joined Dr. Sheldon Marks in Tucson with the goal of applying clinical research and generating publications using and contributing to Dr. Marks' large vasectomy reversal practice and database.

Dr. Burrows has been delighted to contribute to three recent abstracts pertaining to vasectomy reversals' obstructive interval, re-do findings and the effects of smoking. The latter two abstracts were presented as posters at the 2008 ASRM in San Francisco. Drs. Burrows and Marks have several more exciting concepts in the works as their database grows to more than 3,000 patients.

DID YOU KNOW?

The SMRU web site is a valuable resource!!

1. Use the member search function. (It is easy to use and up to date, so bookmark it!)
2. Find links to important and useful ASRM web sites, such as ASRM/SMRU Practice Guidelines and excellent clinical resources. If you haven't visited the site recently, take a look!
3. See the listing of future meetings (dates, times, and locations) relevant to clinicians and scientists with an interest in male reproductive medicine and science.
4. There are numerous ASRM publications on male infertility diagnosis and treatment specifically designed for patients.
5. Find the postgraduate course syllabi from past SMRU postgraduate courses.
6. Read about the Male Reproductive Medicine and Surgery Fellowship program.
7. See the link to a valuable collection of ASRM publications and materials on lifestyle choices which affect fertility. Find downloadable materials for patients on tobacco, alcohol, drug use, safe sex practices, stress, weight, and age. Also, see excellent comprehensive and informative resources for patients!
8. All prior SMRU newsletters are housed on the web site.
9. Links to numerous professional organizations and societies important to clinicians and scientists in our field can also be found on our website.
10. Look for the quick and easy-to-use online application site. Encourage a friend, trainee, or colleague to join today!!!

SMRU Member Update

- Drs. Abraham Morgentaler and Larry Lipshultz will be co-chairing an interactive session on "Treatment of Male Testosterone Deficiency During and After the Reproductive Years" on Monday, October 19, 2009, from 1:15 to 2:15 p.m. at the 2009 ASRM annual meeting.
- Susanne Quallich, ANP-BC, NP-C, CUNP was awarded the 2008 SUNA President's Trophy for Outstanding Contributions to Urologic Nursing.
- Abraham Morgentaler's recent book, *Testosterone For Life: Recharge Your Vitality, Sex Drive, Muscle Mass, and Overall Health* was published in November by McGraw-Hill and recently reviewed in *Journal of Andrology*.
- Rebecca Sokol, MD, MPH serves as an ASRM Director-at-Large.
- Stuart Howards, MD is Treasurer of the ASRM Board of Directors.
- Dorrie Lamb, PhD was recently nominated for the position of ASRM Vice President.

This column provides SMRU members with a forum to keep colleagues abreast of each other's professional (and personal) accomplishments. If you would like an item posted in this newsletter, please email Dr. Moshe Wald, at moshe-wald@uiowa.edu.

Benefits of Membership

The Society for Male Reproduction and Urology (SMRU) is an affiliate society of the American Society for Reproductive Medicine (ASRM) whose members have special interests in male reproduction. The SMRU includes members who are urologists, andrologists, clinical endocrinologists, gynecologists, laboratory scientists involved in clinical activities and/or research, nurses, and other health care professionals. The SMRU is open to all Active and Associate members of the ASRM.

SMRU BENEFITS OF MEMBERSHIP

- Provides professional and lay education
- Develops postgraduate courses in male reproduction and urology
- Offers daily sessions during the ASRM Annual Meeting
- Sponsors SMRU Traveling Scholars program for urology residents/fellows and andrology graduate students for the study of male reproductive medicine
- Includes subscription to SMRU Newsletter
- Fosters research and development of new technologies

CATEGORIES OF MEMBERSHIP

Membership in the ASRM is a requirement for membership in the SMRU.

- Active Membership in the SMRU shall consist of Active Members in the American Society for Reproductive Medicine (ASRM) with special interests in male reproduction.
- Associate membership shall include members of the ASRM who are residents, fellows or post doctoral students with special interests in the male reproduction. This membership category shall be entitled to all rights and privileges of the membership in the Society except the right to vote or hold office.

DUES

Active Members\$75.00 per year
Associate Members.....\$35.00 per year

Please mail completed application to:

SMRU Administrator
1209 Montgomery Highway
Birmingham, AL 35216-2809
Tel: (205) 978-5000
Fax: (205) 978-5005
E-Mail sscarbrough@asrm.org

APPLICATION FOR MEMBERSHIP

The Society for Male Reproduction and Urology (SMRU) is an affiliate society of the American Society for Reproductive Medicine whose members have special interests in male reproduction. The SMRU includes members who are urologists, clinical endocrinologists, gynecologists, laboratory scientists involved in clinical activities and/or research, nurses, and other health care professionals. The SMRU is open to all Active and Associate members of the ASRM.

NAME _____ DEGREE(S) _____

ADDRESS _____ PHONE _____

_____ FAX _____

_____ EMAIL _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____

ASRM STATUS: _____ ACTIVE _____ ASSOCIATE

You initially will be billed for your annual dues at the same time as your ASRM dues.

Mail completed application to:

Society for Male Reproduction and Urology
American Society for Reproductive Medicine
1209 Montgomery Highway
Birmingham, AL 35216-2809
Attn: Susanna Scarbrough
Membership Coordinator - SMRU

Society for Male Reproduction and Urology (SMRU) Fundraiser

Support SMRU and receive a silver sperm tie tac.

Please help support the mission of SMRU and provide funding for the Traveling Scholar's program, the goal of which is to expose urology residents and fellows and andrology graduate students to new scientific forums and information pertinent to the study of male reproduction.

Your tax-deductible contribution of \$300 will support the mission and educational programs of SMRU. In recognition of your contribution, SMRU will send you a limited edition sterling silver sperm tie tac in a velvet presentation case, honoring Richard D. Amelar, M.D., a world-renowned pioneer in the field of male reproduction and urology.

The ASRM is a 501 (C)3 tax exempt organization. All contributions made to the ASRM are fully tax deductible. Enclosed is my tax-deductible donation in the amount of:

\$300 \$400 \$500 \$1,000 \$5,000 \$10,000 Other \$ _____

Please attach a check or pay by credit card. International members may remit payment in U.S. funds only, via check/draft drawn on a U.S. bank, or pay by credit card. I am paying by (please circle one):

Visa

MasterCard

American Express

Check #

BILLING ADDRESS (Address where your credit card bill comes.)

CARD NUMBER

EXPIRATION DATE

NAME AS IT APPEARS ON CARD (Please print.)

The ASRM reserves the right to charge the correct amount if different from the total payment listed above.

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Email _____