Visiting Professor
And
Diane and Morton Stenchever Memorial Lecturer

Robert F Casper MD, FRCS(C)
Professor, Division of Reproductive Sciences, University of Toronto
Senior Investigator, Lunenfeld-Tanenbaum Research Institute,
Mount Sinai Hospital,
Medical Director, Toronto Centre for Advanced Reproductive Technology (TCART),
Toronto, ON,
Medical Director, Inception Cord Blood Bank, Mississauga, ON

Wednesday, May 28, 2014
8:00am – 12:00pm

Women & Children’s Hospital
Alford Auditorium
219 Bryant Street, 1st Floor
Buffalo, New York
ROBERT F. CASPER, MD, FRCS(C)

Dr. Casper is the Camille Dan Family Research Chair in Translational Cell Biology and a Senior Investigator in the Samuel Lunenfeld Research Institute at Mount Sinai Hospital. Dr. Casper is Professor of the Division of Reproductive Endocrinology and Infertility in the Department of Obstetrics and Gynecology at the University of Toronto, with cross appointments in the Departments of Physiology, Medicine (Division of Endocrinology) and The Institute of Medical Sciences. Dr. Casper is a clinician-scientist who founded the Toronto Centre for Advanced Reproductive Technology (TCART) for fertility treatment in 1993 and is the Medical Director. He is a founder and Medical Director of the Inception LifeBank Cord Blood Programme.

Dr. Casper received his MD at the University of Western Ontario in 1973 and his Fellowship in Obstetrics and Gynecology from the Royal College of Surgeons of Canada in 1977. In 1978, he was awarded a Medical Research Council of Canada Fellowship for training in Reproductive Endocrinology and Infertility at the University of California in San Diego with Dr Sam Yen, and was certified as a diplomat of the American Board of Obstetrics and Gynecology in Reproductive Endocrinology in 1982.

Dr. Casper’s research activities have been continuously funded by the MRC/CIHR since 1980. He was awarded an MRC scholarship in 1982, and in 1997, a joint CIHR/INSERM Visiting Scientist award during a sabbatical in the laboratory of Professor Edwin Milgrom in Paris. Dr. Casper has authored over 300 papers (cited 9722, h-index 68).

Dr. Casper is past president of the Canadian Fertility and Andrology Society (CFAS). He is an Editorial Editor of Fertility and Sterility and a section editor for Reproductive BioMedicine Online. He is on the editorial boards of several other journals in Obstetrics and Gynecology and Reproduction. Dr. Casper is an honorary member of the Middle East Fertility Society and was awarded the Health Silver Medal of the Ministry of Health, Republic of Lebanon in 2001. He was the 2004 recipient of the CFAS Award of Excellence for lifetime research achievement. In 2012 he received the "Excellence in Research Award” from APOG (Association of Academic Professionals in Obstetrics and Gynecology of Canada).
Resident Research Day Schedule  
Wednesday, May 28, 2014

**Moderator:**  Glenna Bett, Ph.D.

8:00am  Breakfast in the Alford Auditorium

8:10am  Opening Comments  
*Taechin Yu, M.D.*  
Residency Program Director

8:15 – 8:25 a.m.  “Short Cervix after 28 weeks Gestation: Is it really a risk factor for preterm birth? A Retrospective Analysis”  
*Meaghan Aalto, M.D.*  
Mentor: Amol Lele, M.D.

8:30 – 8:40 a.m.  “Placental alpha-microglobulin-1 and Combined Traditional Diagnostic Test: A Cost-Benefit Analysis”  
*Nelson Echebiri, M.D.*  
Mentor: Vanessa Barnabei, M.D., Ph.D.

8:45 – 8:55 a.m.  “TBA”  
*Shawna Hughes, M.D.*  
Mentor: TBA

9:00 – 9:10 a.m.  “A retrospective review of placental weights comparing urban and suburban populations with gestational age correlation.”  
*Lisa Licare, D.O.*  
Mentor: Tamera Paczos, M.D.

9:15 – 9:30 a.m.  BREAK

9:30 – 9:40 a.m.  “Survey of obstetricians on issues relating to pregnancy during a medical career”  
*Bianca Matos, M.D.*  
Mentor: Beman Khulpateea, M.D.

9:45 – 9:55 a.m.  “Evaluation of fertility counseling and referral for reproductive-age patients receiving cancer treatment at a regional cancer center”  
*Biren Patel, M.D.*  
Mentors: Majid Shaman, M.D. & Peter Frederick, M.D.

10:00 – 10:10 a.m.  “Perception of Care Among Patients in an Urban Based Clinic”  
*Olaya Pettle, M.D.*  
Mentor: Kenneth Kahn, M.D.

10:15 – 10:25 a.m.  “Transcerebellar diameter (TCD) to predict gestational age in pregnancies complicated by pre-gestational diabetes.”  
*Ryan Schlueter, D.O.*  
Mentors: Shailini Singh, M.D. & Vanessa Barnabei, M.D., Ph.D.

10:30 – 10:45 a.m.  BREAK

10:45 – 11:45 p.m.  “Shiftwork: The Dark Side of Light”  
*Robert F Casper MD, FRCS(C)*  
Diane and Morton Stenchever Memorial Lecturer

12:00 p.m.  Luncheon in the Ob/Gyn Classroom
ABSTRACTS

“Short Cervix after 28 weeks Gestation: Is it really a risk factor for preterm birth? A Retrospective Analysis”
Meaghan Aalto, M.D.
Mentor: Amol Lele, M.D.

Background: Spontaneous preterm birth (sPTB) is a major cause of perinatal morbidity and mortality. Short cervical length is a well-proven risk factor for sPTB in the second trimester, however little research has been done that supports using cervical length as a screening tool for risk of sPTB past 28 weeks. We conducted a retrospective chart review of patients admitted with a diagnosis of short cervix to determine if measurement of cervical length after 28 weeks gestation remained a risk factor for sPTB prior to 37w0d.

Methods: 320 charts were reviewed between 2007-2012. 106 patients met inclusion criteria. Data collected included age, race, gravity, parity, gestational age at time of admission for short cervix, cervical length, FFN results, history of cervical instrumentation, and substance use. We then assessed whether or not those admitted after 28 weeks had the same risk for sPTB as those admitted prior to 28 weeks.

Results: 40 patients were admitted for short cervix prior to 28 weeks, and 66 at or after 28w0d. sPTB occurred in 14 of the patients admitted prior to 28 weeks (35.0%) and in 21 of those admitted later (31.8%). A history of sPTB was a significant risk factor for delivering prior to 37w0d in those in the after 28 weeks group (p=0.008). Cervical length showed no significance in relation to gestational age at delivery.

Conclusion: The risk of sPTB is lower for those admitted after 28 weeks than for those admitted prior to 28 weeks. The only other significant risk factor shown for this group was a history of sPTB.

“Placental alpha-microglobulin-1 and Combined Traditional Diagnostic Test: A Cost-Benefit Analysis”
Nelson Echebiri, M.D.
Mentor: Vanessa Barnabei, M.D., Ph.D.

Objective: To evaluate if the placental alpha-microglobulin-1 test (PAMG-1) versus the combined traditional diagnostic test of pooling, nitrazine, and ferning (CTDT) would be a cost beneficial screening strategy in the setting of potential preterm premature rupture of membrane (PPROM).

Study Design: A decision analysis model was used to estimate the economic impact of PAMG-1 test versus the CTDT on preterm delivery (PTD) costs from a societal perspective. Our primary outcome was the annual net cost benefit per person tested. Baseline probabilities and costs assumptions were derived from published literature. We conducted sensitivity analyses using both deterministic and probabilistic model. Cost estimates reflect 2013 U.S. dollars.

Results: Annual net benefit from PAMG-1 was $20,014 per person tested, while CTDT had a net benefit of $15,757 per person tested. If the probability of rupture is less than 38%, PAMG-1 will be cost beneficial with an annual net benefit of $16,000 to $37,000 per person tested, while CTDT will have an annual net benefit of $16,000 to $19,500 per person tested. If the probability of rupture is greater than 38%, CTDT is more cost beneficial. Monte Carlo simulations of one million trials selected PAMG-1 as the optimal strategy with a frequency of 89%, while CTDT was only selected as the optimal strategy with a frequency of 11%. Sensitivity analyses were robust.

Conclusion: PAMG-1 is the most optimal diagnostic method both economically and clinically in diagnosing PPROM in uncertain presentations and when CTDT is equivocal at 34 weeks to less than 37 weeks gestation.

“TBA”
Shawna Hughes, M.D.
Mentor: TBA

No abstract available at time of publication.
"A retrospective review of placental weights comparing urban and suburban populations with gestational age correlation."
Lisa Licare, D.O.
Mentor: Tamera Paczos, M.D.

Objective: We aim to study the placental weights at an urban (Women and Children’s Hospital of Buffalo, WCHOB) vs. suburban (Millard Fillmore Suburban Hospital, MFSH) hospital with the assumption that the suburban population would have larger placentas secondary to better access to health care, higher quality of diet, and access to necessary resources for pregnancy.

Methods: Five hundred placentas were analyzed between the dates of May-June 2012. Twin deliveries were excluded, bringing the number down to 493. Gestational ages at the urban center below 34 weeks were also excluded since the suburban center does not deliver below that gestational age. This brings the final numbers to 232 for WCHOB and 240 for MFSH. These placentas were then plotted against their gestational ages at each facility and compared.

Results: Analysis was conducted using t-test. To control for the effect of gestational age, linear regression was conducted. This analysis showed that placental weights increased approximately 16.5g per added gestational day and were approximately 22g heavier for patients at MFSH.

Conclusions: Both gestational age (39.2 for MFSH vs. 38.8 for WCHOB) and placental weight (507.6g vs. 478.7g) were greater at MFSH. This analysis was conducted both with and without diabetes and hypertension in the model. Neither of these additional variables were statistically significant (see chi-square tests) and did not change the results, showing that the suburban population, with more access to resources had larger placentas.

"Survey of obstetricians on issues relating to pregnancy during a medical career"
Bianca Matos, M.D.
Mentor: Beman Khulpateea, M.D.

Objectives: In 2010, 46% of resident physicians were women. Obstetrics and Gynecology is the specialty with the highest percentage (80%) of female residents. As female residents get pregnant and start families during residency, this may have effects on both training and personal life. As the field of OB/GYN has the highest proportion of female residents, we seek to elucidate the perceptions related to reproduction in this specialty.

Methods: An anonymous survey was distributed to residents, attendings, and residency program directors of 24 OB/GYN residencies in New York State. The survey will ascertain their attitudes toward and their experiences with pregnancy during residency.

Results: At the current time data is still being collected.

Discussion: Perceptions of pregnancy during residency may be unique in the field of obstetrics and gynecology. This survey will bring to light the current attitudes regarding pregnancy and residency.
“Evaluation of fertility counseling and referral for reproductive-age patients receiving cancer treatment at a regional cancer center”
Biren Patel, M.D.
Mentors: Majid Shaman, M.D. & Peter Frederick, M.D.

Objective: Maintaining fertility after cancer treatment is an immensely important consideration for reproductive-age women. As a result in 2006, the American Society of Clinical Oncology (ASCO) released recommendations addressing fertility preservation and counseling, encouraging practitioners to offer fertility preservation either directly or via referral to specialists. Our objective is to assess the rate and quality of fertility preservation counseling before and after the ASCO guidelines at a major cancer center.

Methods: After IRB approval, all females age 18-40 that were treated at our center with lymphoma, leukemia or breast cancer between January 2003 and December 2010 were contacted by mail to complete a one-page, multiple-choice survey. Comparisons between the cohorts were made using Fisher’s Exact Test.

Results: Of the 332 potential patients, there were 81 [24.4%] responses, with 32 patients in the pre-ASCO recommendation cohort and 49 patients in the post-ASCO cohort. In our primary outcome, 7.1% [n=14] of the pre-ASCO cohort was offered fertility preservation vs. 27.8% [n=36] in the post-ASCO cohort, p=0.148. Additionally, 0% [n=12] of the pre-ASCO cohort were referred to reproductive specialists versus 14% [n=36] in the post-ASCO cohort, p=0.312.

Conclusion: Though not statistically significant, there appears to be an increasing trend of fertility preservation discussion and specialist referral for women receiving cancer treatment at our regional cancer center since the introduction of the ASCO guidelines.

“Perception of Care Among Patients in an Urban Based Clinic”
Olaya Pettle, M.D.
Mentor: Kenneth Kahn, M.D.

Background: Studies have shown that a significant portion of a patient’s perception of adequate care is based on the physician or team of physicians the patient is seeing. In many teaching hospitals around the country this perception is skewed because patients encounter multiple physicians. Surveys used to evaluate and improve patients’ perception of care are helpful but are not routinely used in most teaching institutions.

Aim: We created a survey to judge patients’ perception of care received in an urban clinic. Our goal was to determine the extent of our patients’ perception of adequate care and utilize the results for quality improvement.

Methods: A detailed survey of questions with opinion-based responses was distributed to patients upon arrival to the clinic reception area. Questions included information on patient demographics, patient education and counseling, and perception of adequate care. Statistical analysis of results was done using frequency analysis, X2 tests and Fisher’s exact test where appropriate.

Results: A total of 105 surveys were collected. Frequency results showed 88% of our patients felt their care was adequate, 98% felt their questions and concerns about their care were adequately address, and 93% felt they were adequately educated about their diagnosis. 68% of our patients did not know which provider they were seeing and 58.7 % of patients would like to see the same provider.

Conclusion: This survey demonstrates that our patients believe their care is adequate. It shows that with minor improvements our patients perception of care can be further increased.
“Transcerebellar diameter (TCD) to predict gestational age in pregnancies complicated by pre-gestational diabetes.”

Ryan Schlueter, D.O.
Mentors: Shailini Singh, M.D. & Vanessa Barnabei, M.D., Ph.D.

Objective: Transcerebellar diameter (TCD) has emerged as an alternative measurement for pregnancy dating. The TCD has been shown through previous nomograms to be a reliable and reproducible indicator of gestational age. The specific aim of this study was to examine correlation between first trimester predicted gestational age on initial prenatal ultrasound and gestational age predicted by TCD in pregestational diabetics.

Methods: A retrospective chart review was performed to identify pregnant women with pregestational diabetes who delivered at the Women and Children’s Hospital of Buffalo between 2006 and 2012. For the patients identified, records from the initial prenatal ultrasound in the first trimester and subsequent ultrasounds with TCD adjusted gestational age were recorded. The gestational age that is predicted by first trimester sonogram was then compared to the gestational age as predicted by TCD and fetal biometric indices on sonograms later in the pregnancy. A correlation coefficient between the actual and TCD predicted gestational age was calculated.

Results: A total of 31 pregestational diabetics were included. Results displayed that the correlation coefficient between the actual and predicted gestational age by TCD was r=0.97 and by biometric measurements was r=0.96, displaying a strong correlation between the actual and predicted gestational age for both groups. Concordance data exhibited that predicted gestational age by TCD was ±6 days in 87% of fetuses and within ±6 days in 90% of biometric measurement predicted gestational age.

Conclusion: The results indicate that TCD may be a promising sonographic tool for the assessment of gestational age in patients with pregestational diabetes.
Residency Program

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Breakfast and Lunch provided by
The University at Buffalo, Dept. Ob/Gyn