

Michigan Sonographers Society Monthly Meeting; Wednesday, March 16, 2016

Beaumont Hospital Royal Oak, Michigan

Speaker: Dr. R. Carballido; OB/Gyn

Sponsor: Alpinion US Systems; Jeff Rubinoff

Interesting Case Presentation: Oakland Community College DMS Students

Introduction: Liz Lawrence, President~Michigan Sonographers Society ----Liz thanked our sponsor Alpinion US Systems/Jeff Rubinoff for the delicious dinner. We appreciate our sponsors/vendors as we could not continue to hold the interesting and informative monthly meetings without them.

Interesting Case: The interesting case presentations were shared by OCC students. The case that will be highlighted is as follows: a 30yr old G6P4 patient with a history of prior C Section was 29w4d and presents to the US department for fetal evaluation. The placenta was shown to be abnormally located and further US interrogation was done to diagnose whether the placenta was low lying or marginal previa vs complete placenta previa. Color doppler was placed over the placenta and it was determined that the placenta~ in addition to be suboptimally situated within the uterus~was shown to appear to infiltrate the maternal bladder. The placenta was diagnosed to be a placenta accreta. *Placenta accreta* is a general term used to describe the clinical condition when part of the placenta, or the entire placenta, invades and is inseparable from the uterine wall. Placenta accreta is a potentially life-threatening obstetric condition that requires a multidisciplinary approach to management. The incidence of placenta accreta has increased and seems to parallel the increasing cesarean delivery rate. Women at greatest risk of placenta accreta are those who have myometrial damage caused by a previous cesarean delivery with either an anterior or posterior placenta previa overlying the uterine scar. Diagnosis of placenta accreta before delivery allows multidisciplinary planning in an attempt to minimize potential maternal or neonatal morbidity and mortality. (www.acog.org)

Sponsor: Our sponsor Jeff Rubinoff from Alpinion US Systems shared information on one of their US systems the Ecubei7. Alpinion E-CUBE 7 is the only system in its class that provides high featured transducer like single crystal convex and phased array. Crystal Signature™ technology enables higher energy conversion efficiency, higher sensitivity and wider bandwidth. ALPINION's core imaging technology set creates optimized images by effectively decreasing artifacts and enhancing the edge of organs. ALPINION's software driven imaging platform ensures stable imaging performance and uniform image quality. Xpeed™ optimizes images in B-mode, Color Flow and Doppler modes with one button operation.

Guest Speaker: Our featured speaker was Dr. Carballido; OB/Gyn who spoke primarily on the cervix during pregnancy. Incompetent cervix and subsequent preterm delivery remains 13% of the cause for neonatal morbidity and mortality. Measurement of the cervix length by transvaginal ultrasound is considered the most predictive test until this moment, it is safe, easy to perform, reproducible and accurate. • Other techniques like elastographic assessment of the internal cervical os at 18-22 weeks of pregnancy may identify patients with high risk of preterm delivery in low-risk, asymptomatic women.

Transabdominal cervix evaluation has many shortcomings: Fetal parts can be interposed, the maternal distended bladder could elongate cervix or mask funneling. Cervix that might be shortened or opened could be missed. The clinical decision cannot be taken based solely in transabdominal evaluation of the cervix. Transvaginal cervix evaluation It's the best technique for cervix visualization. It is easy to learn and perform and gives direct visualization without obstruction. Normal cervix length is 25 to 50 mm between 14 and 30 weeks. It is considered abnormal if less than 25 mm. The measure should be compared to gestational age to estimate the predicted risk of preterm birth.

The next topic was amniotic sludge~the presence of free-floating hyperechogenic material within the amniotic fluid in close proximity to the uterine cervix• Amniotic fluid 'sludge' has been identified in asymptomatic women at risk for spontaneous preterm delivery in the mid-trimester of pregnancy and is also an independent risk factor for preterm prelabor rupture of membranes (PROM) and spontaneous preterm delivery.

The presence of AF sludge in pregnancies with a short cervix is a risk factor for extreme prematurity (delivery prior to 26 weeks), histological chorioamnionitis, and perinatal death. (Am J Obstet Gynecol 2014;211:506.e1-9.)

Elastography is a promising method to assess tissue differences in stiffness or elasticity what was historically assessed manually by palpation. Ultrasound elastography is a non-invasive diagnostic technique performed with conventional B-mode ultrasound to help assess tissue stiffness. Strain elastography can help clinicians characterize abnormal tissue by assessing the stiffness in relationship to surrounding tissue. Elastographic assessment of the internal cervical os at 18-22 weeks of pregnancy may identify patients with high risk of preterm delivery in low-risk, asymptomatic women. Elastography of the uterine cervix may be an objective method for assessment of softening of tissue in the region of the internal os before induction of labor. Standardization of the cervical properties observed on elastography during pregnancy may help to guide the use of prostaglandins or oxytocin for induction of labor. (Ultrasound Obstet Gynecol. 2011 Jul;38(1):52-6.)

Conclusion: Liz thanked the attendees and reminded them the MSS Symposium will be April 15-16, 2016 at the Sheraton Hotel-Novi, Michigan. There will be many interesting speakers and vendors as well as great food and networking opportunities. This is the 40th year for our Society!

Respectfully submitted,

Julie Atkinson, RDMS/RVT

Michigan Sonographers Society Secretary.