



## Center For Advanced Fetal Care Newsletter

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## Welcome!

It is with much excitement that we introduce to you the newsletter of our “Center For Advanced Fetal Care” (CFAFC), a center dedicated to prenatal diagnosis offering 2D, 3D, and 4D ultrasound, invasive procedures, as well as first trimester serum biochemistry, in accordance with the guidelines of the Fetal Medicine Foundation.

Our mission is offering our patients the most up-to-date prenatal diagnosis, in a serene setting, with instantaneous communication with the referring physicians.

In addition, we are dedicated to education and for this reason, our center welcomes anyone interested in observing first and second trimester sonography. And in our continuous efforts to stay abreast, we shall continue to put forth this quarterly newsletter, available on our website, for all who are interested. Here, they can find clinically relevant information, summaries of abstracts from major international meetings, as well as information on useful websites and listings of upcoming meetings. We also welcome your contribution to this newsletter in the form of interesting cases, articles or any research you would like to share.

Any input and feedback you may have is awaited and we hope that this may herald the beginning of a fruitful scientific collaboration in order to improve the status of our mothers and the future generation...

## Early Prediction of a Healthy Pregnancy

At the Annual Clinical Meeting of the American College of Obstetricians and Gynecologists, a group of researchers led by Dr. Souyoung Bae from the University of Toledo, Ohio presented very interesting data to aid in the early prediction of a healthy pregnancy. Their study was a case-control study involving 1092 pregnancies in which the size of the gestational sac, fetal yolk sac as well as the fetal heart rate, on post conception days 33 to 36 (6w5d to 7w1d), were assessed. Successful pregnancy outcome could be predicted in 94% of cases, if during that gestational period, the gestational sac diameter was more than 12mm, yolk sac diameter was between 2-6 mm and fetal heart rate was present. They were awarded ACOG’s third-place prize.

## Maternal Obesity and Ultrasound Detection of Anomalous Fetuses

With the ever increasing rates of obesity, inspite of the advances in our sonographic machinery, assessing for fetal malformations in the second trimester remains a major challenge. This was further evaluated by a retrospective cohort study, over a 5 year period, by Dr. Dashe and colleagues from the University of Texas Southwestern Medical Center and was published in the May 2009 issue of Obstetrics and Gynecology. The study involved 10112 low risk pregnancies and 1098 pregnancies that were referred because of a suspected abnormality or because of high-risk indications. As the body mass index (BMI) increased, detection rates decreased. The difference was approximately 20% less detection with increased BMI, and more so in the presence of pre-gestational diabetes. The authors concluded that in the presence of maternal obesity, our counseling should address this decrease in detection of anomalous fetuses, especially in the presence of - diabetes.

## Select Abstracts from the Society of Maternal Fetal Medicine's Annual Meeting in Chicago, February 1-6, 2010



A well attended meeting was held in Chicago with 836 abstracts presented. Much is being done in the new area of proteomics, identifying key protein and studying their involvement in prematurity, placental abnormalities and poor obstetrical outcome. In addition, the role of ultrasound in early gestation in the identification of chromosomal, structural fetal abnormalities and early fetal echocardiography was extensively discussed. Select clinically applicable abstracts and other clinically useful information relayed are addressed below.

### **Teratogenicity of Ionizing Radiation: Oral Communication Genetics Course, Melissa Fries, MD**

We are frequently asked by our patients about the risks of radiation in pregnancy. The key numbers to keep in mind are that exposure of < 5 rads should have no adverse effect, 5-10 rads is probably acceptable and the threshold beyond which the risks increase is 15-20 rads. Bear in mind that the amount of radiation in the most common procedures is as follows:

CXR 0.02-0.07 mrad, Abdominal plain film 100 mrad, CT of the abdomen and spine 3.5 rads, CT of the head and chest < 1rad, an IVP > 1 rad, Hysterosalpingography 1.8 rads, Mammography 7-20 mrad and Barium enema 2-4 rads.

### **Ultrasound Detected Subchorionic Hemorrhage: What are the Implications? Shayna M. Norman, MD et al.**

This was a retrospective review of 63966 women with singleton pregnancies who presented for routine second trimester ultrasound examination at gestations less than 22 weeks. Of those, 1081 were found to have a subchorionic hematoma (SCH) for an incidence of 1.7%. Women with SCH were found to have a 2 fold increased risk of abruption, a risk that remained irrespective of whether or not they experienced bleeding in the first half of pregnancy. There was however, no increased risk of IUGR, IUFD, PPROM or preeclampsia in the group with SCH. The authors thus conclude that patients with SCH on routine second trimester scan should be urged to report any bleeding, but may be reassured that this does not place them at an increased risk for other adverse pregnancy outcomes.

### **Maternal Outcomes by Labor Onset Type. Bailit et al. for the Consortium on Safe Labor**

156786 deliveries from 10 institutions were divided by labor onset type: spontaneous, elective induction, indicated induction and unlabored cesarean. There were no differences between elective induction and spontaneous labor for endometritis or ICU admission after adjusting for preeclampsia, CHTN, diabetes, PROM and GBS positivity. However elective induction was 3.4 times more likely than spontaneous labor to result in a hysterectomy.

### **Long Term Physical and Neurological Development in Newborns with Isolated Single Umbilical Artery. Shilpa Chetty-John MD, et al.**

This was a study aiming at evaluating the neurological outcome in children born with an isolated single umbilical artery (ISUA). Here 260 newborns with ISUA were identified from a database and compared to 40811 newborns from the same database with a three vessel cord. Maternal demographics, perinatal outcome, as well as placental morphological and histopathological characteristics were compared. Newborns were evaluated at birth, 4, 8 and 12 months and subsequently at 3, 4 and 7 years. Endpoints were height, weight, head circumference as well as neurological assessment. This study demonstrated no differences in any of the above variables between the 2 groups. In addition, the authors concluded that such adverse perinatal outcomes as prematurity, decreased birth weight and mortality could not be attributed to isolated single umbilical artery.

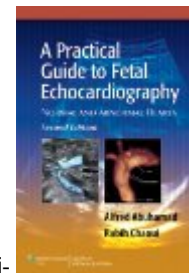
### **The Relationship Between Low Maternal Values on Glucose Challenge Test and Pregnancy Outcomes. Kamakshi Vemareddy et al.**

We have always been advised to closely monitor women with gestational diabetes for adverse pregnancy outcomes, and little attention is ever paid to those with low glucose levels on a glucose challenge test (GCT). In this paper, the authors address this group of women who have no pregnancy complications, deliver at term, but who have a one hour glucose level < 90 mg/dl at the time of the GCT. This was a historic matched cohort study that included 124 women with low GCT and 249 women with normal GCT at 24-28 weeks. There was a 3 times higher incidence of oligohydramnios and lagging abdominal circumference in women with low GCT. This is suggestive of placental insufficiency. The authors thus advocate close surveillance in this group to improve perinatal outcome.

[Complete abstracts can be found in the supplement to the American Journal of Obstetrics and Gynecology \(The Grey Journal\) December 2009, Volume 201, Number 6.](#)

## CFAFC's Literary Recommendations

### A Practical Guide to Fetal Echocardiography, Second Edition



Written by: Alfred Z. Abuhamad, MD and Rabih Chaoui, MD. Nov 2009: 384 pages, 435 illustrations, \$129

ISBN-10: 0781797578, ISBN-13: 978-0781797573 . [www.lww.com](http://www.lww.com) and [www.amazon.com](http://www.amazon.com)

Absolute perfection, visually stunning, truly the ultimate! The brainchild of two of the world leaders in obstetrical sonography, this is a must have for anyone who does prenatal ultrasound. Compact, packed with incredible images (sonographic, schematic and pathologic) as well as detailed tables, and a great aid to the sonologist who encounters a cardiac abnormality. In addition to normal fetal cardiac anatomy and what was covered in the first edition, this edition has a chapter on first trimester fetal echocardiography and lists the first trimester findings for each cardiac defect in the corresponding chapter for that particular defect. In the section on "abnormal hearts", one can find details on all the diagnostic modes and planes necessary to diagnose that particular abnormality. Having this "bible" on fetal echocardiography guides the sonologist as to what to look for and enables the sonologist to ascertain the diagnosis and provide proper counseling to the family pending further evaluation by a pediatric cardiologist...This should unequivocally be "the guide" present at the bedside in every ultrasound unit...

## Call for Abstracts

Two International upcoming conferences are planned in the next 6 months. Both are accepting abstracts of any interesting research you may have to present. The first will be the 9th World Congress of the Fetal Medicine Foundation to be held in Rhodes, Greece June 20-24. Abstracts are being accepted at [www.fetalmedicine.org/wcfm/abstract.htm](http://www.fetalmedicine.org/wcfm/abstract.htm).

The second meeting will be the 20th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology to be held in Prague October 10-14, 2010. Abstracts can be submitted at [www.isuog.org](http://www.isuog.org) and the abstract submission deadline is April 12, 2010.

## Fetal Medicine Foundation

With the ever evolving role of the first trimester scan, it is of utmost importance to obtain proper training and certification. And this has been so simplified by Professor Nicolaides at the Fetal Medicine Foundation who has recently introduced a web-based course. All who are interested can log onto the website: [www.fetalmedicine.com](http://www.fetalmedicine.com) to take the course, free of charge, and then submit their images for certification. The 11-14 week scan textbook is also available in Arabic, free of charge, for download.

## Local Meeting: MEMA

The American University of Beirut together with the Cleveland Clinic will be hosting the 43rd Annual Middle East Medical Assembly on April 22- April 25 at the AUB in Beirut.

A full Obstetrical day is planned for Friday April 23. International experts from the USA and Europe will be participating. For further details, check the MEMA website at <http://mema.aub.edu.lb>

## Lebanese Research

Attitude of women with IVF and spontaneous pregnancies towards prenatal screening

Human Reproduction Vol.23, No.11 pp. 2438-2443, 2008

Antoine A Abu-Musa, Anwar H Nassar, Ihab M Usta

**Background:** Factors influencing a pregnant woman's decision to accept prenatal testing are largely undefined. Our study aimed to compare the acceptance rate of prenatal diagnosis in IVF or ICSI-conceived women (cases) with that of women conceived spontaneously (controls).

**Methods:** Retrospective chart review of all primiparas carrying singletons who were offered prenatal testing from 2004-2007. The influence of IVF/ICSI on the acceptance of prenatal screening was evaluated.

**Results:** 336 pregnancies were offered prenatal testing (120 cases and 216 controls). Cases were less likely to perform prenatal testing compared with controls (52.5% versus 72.7%;  $P < 0.001$ ). The rate of utilization of prenatal testing was independent of the infertility cause. Multiple logistic regression analysis revealed that IVF/ICSI-conceived women (OR 0.427, 95%CI 0.252-0.724), those  $\geq 35$  years (OR 0.184, 95%CI 0.102-0.329) and lower socioeconomic class (OR 0.339, 95%CI 0.197-0.584) were less likely to perform triple screen test and IVF/ICSI-conceived women (OR 0.354, 95%CI 0.131-0.958) and those of lower socioeconomic class (OR 0.113, 95%CI 0.033-0.403) were less likely to perform amniocentesis.

**Conclusion:** There was a significant difference in acceptance rate of prenatal diagnostic testing between IVF/ICSI-conceived women and those conceived spontaneously. IVF/ICSI-conceived women were less likely to opt for prenatal diagnosis even after controlling for confounding variables.



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[www.cfafc.org](http://www.cfafc.org)

## Bookmark These Websites

Useful Websites	Address
American College of Obstetricians and Gynecologists	<a href="http://www.acog.com">www.acog.com</a>
American Institute of Ultrasound in Medicine	<a href="http://www.aium.org">www.aium.org</a>
Fetal Medicine Foundation	<a href="http://www.fetalmedicine.com">www.fetalmedicine.com</a>
International Society of Ultrasound in Obstetrics and Gynecology	<a href="http://www.isuog.org">www.isuog.org</a>
Medline	<a href="http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed">www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed</a>
Society of Maternal Fetal Medicine	<a href="http://www.smfm.org">www.smfm.org</a>
World Association of Perinatal Medicine	<a href="http://www.wapm.info">www.wapm.info</a>
World Federation for Ultrasound	<a href="http://www.wfumb.org">www.wfumb.org</a>

## Upcoming Congresses

COURSE TITLE	DATES	LOCATION	WEBSITE ADDRESS
6th World Congress of Perinatal Medicine in Developing Countries	March 8-12, 2010	Jakarta, Indonesia	<a href="http://www.6wcpm2010.org">www.6wcpm2010.org</a>
6th International Symposium on Diabetes and Pregnancy	March 24-26, 2011	Salzburg, Austria	<a href="http://www.kenes.com/dip2011/">www.kenes.com/dip2011/</a>
Annual Convention of the American Institute of Ultrasound in Medicine	March 24-27, 2010	San Diego, USA	<a href="http://www.aium.org/cme/events/ann2010/ann2010.aspx">http://www.aium.org/cme/events/ann2010/ann2010.aspx</a>
6th International Scientific Meeting of the International Society of Ultrasound in Obstetrics and Gynecology	March 25-29, 2010	Cairo, Egypt	<a href="http://www.isuogcairo2010.com">www.isuogcairo2010.com</a>
Ultrasound in Reproductive Medicine and Infertility	March 27-28, 2010	San Diego, CA	<a href="http://www.aium.org/cme/events/pg2010_3/pg2010_3.aspx">http://www.aium.org/cme/events/pg2010_3/pg2010_3.aspx</a>
58th Annual Clinical Meeting of the American College of Obstetricians and Gynecologists	May 15-19, 2010	San Francisco, CA	<a href="http://www.acog.org/acm/">www.acog.org/acm/</a>
9th World Congress in Fetal Medicine	June 20-24, 2010	Rhodos, Greece	<a href="http://www.fetalmedicine.com/fmf/courses-congress/conferences/">www.fetalmedicine.com/fmf/courses-congress/conferences/</a>
20th World Congress of the International Society of Ultrasound in Obstetrics and Gynecology	October 10-14, 2010	Prague, Czech Republic	<a href="http://www.isuog.org/WorldCongress/2010/">www.isuog.org/WorldCongress/2010/</a>