Team-Based Approach Key to Care
In Peripartum Cardiomyopathy

BY KEETI WACHER
Senior Writer

ASHEVILLE, N.C. — Focus on the woman’s health in those rare cases of peripartum cardiomyopathy, said Thomas S. Ivester, M.D., at the Southern Obstetric and Gynecologic Seminar. “Maternal health in those rare cases of peripartum cardiomyopathy is critical.” Dr. Ivester said. He suggested serial echocardiography to evaluate the recovery of left ventricular function. Avoiding subsequent pregnancies until function improves is important, so make sure these patients are on adequate contraception. Earlier ICD implantation or placement on a transplant list should be considered for patients who suffer significant rhythm deterioration or have persistently low ejection fractions.

“Most importantly, … obstetric issues do not disappear with delivery. [The mother] is still an obstetric patient, even if the baby is delivered,” Dr. Ivester said. Peripartum changes can persist in some women for many weeks after delivery, and the obstetrician still has an important role to play in their care, especially in helping to differentiate the changes associated with pregnancy from other conditions.

In a normal pregnancy, blood volume increases 50%-100%. Systemic vascular resistance decreases 20%, and the blood is hypercoagulable. Cardiac output can fluctuate. Respiratory alkalosis may occur. The heart is displaced upward and to the left. The patient will have slight left ventricular hypertrophy. These changes can be seen on echocardiography. There is frequently a left axis deviation due to these changes. There also may be nonspecific ST segment and T-wave changes.

Profound cardiac changes also occur during labor. Systemic vascular resistance can go up 10%-25% with each contraction. “That’s a substantial increase for a patient with a very sick myocardium or those with significant valvular diseases,” Dr. Ivester said.

Women in labor will autotransfuse 300-500 cc every time they contract, especially if they are near term. Cardiac output fluctuates as labor progresses. In early labor (<3 cm), cardiac output goes up about 17%. In the second stage of labor (> 8 cm), cardiac output increases at least 34%.

After Laparoscopic Myectomy, Vaginal Delivery Can Be Safe

Vaginal delivery after laparoscopic myectomy can be accomplished safely without uterine rupture by using management protocols that are similar to those used for vaginal birth after cesarean section, reported an interdisciplinary team led by Jun Kumakini, M.D., and his associates at Juntendo University, Tokyo.

In a study of 108 women who wanted to become pregnant after undergoing laparoscopic myectomy (LM) and were followed for at least 6 months, 40 spontaneous pregnancies and 7 pregnancies by assisted-reproductive technology occurred in 40 women over a 4-year period. Using Cox regression analysis, the investigators found that pregnancy after LM was positively associated with the diameter of the largest myoma (odds ratio [OR] 1.06) and negatively associated with the patient’s age (OR 0.88) and with the number of enucleated myomas (OR 1.17).

Cardinal 12 deliveries occurred at an average gestational age of 37 weeks’ gestation. Attempted vaginal birth after LM was unsuccessful in four patients (J. Minim. Invasive Gynecol. 2005;12:241-6). Vaginal birth after LM was performed according to recommendations from the American College of Obstetricians and Gynecologists on vaginal birth after cesarean section, Dr. Kumakini said.

In the 19 pregnancies that resulted in vaginal deliveries after LM, the average diameter of the largest myoma at LM was 68.7 mm, the average number of enucleated myomas was 2.9, and the average number of hysterotomies was 2.5.

In the 68 patients who received LM but didn’t get pregnant, the average diameter of the largest myoma was 62.3 mm and the average number of enucleated myomas was 3.7. No patient suffered uterine rupture during or after delivery, the investigators said, perhaps because all enucleation wounds were sutured, as they would be with a paratome.

Because some patients had infertility factors other than myoma before LM, the researchers said, “it is not necessary to examine a larger population, not including such patients, to evaluate whether the implantation environment alone is responsible for the reduced fertility associated with uterine myomas.”

—Kevin Foley

Adding Ultrasound Ups Sensitivity of AFP Screen to 98%: Study

BY JERRY INGRAM
Contributing Writer

ORLANDO — Adding ultrasound to maternal serum AFP screening may help clinicians identify fetal neural tube defects according to research that was presented during the annual meeting of the American Institute of Ultrasound in Medicine.

“From the standpoint of neural tube defect detection, the maternal serum AFP screening test remains a good test — in our series, more neural tube defects were detected if the test was used than if it was not used—but the sensitivity of the test is significantly better if gestational age is confirmed with ultrasound,” explained Jodi S. Dashe, M.D., of the University of Texas Southwestern Medical Center, Dallas.

“We were also pleased to find that in this series, the detection of neural tube defects with standard ultrasound was excellent,” Dr. Dashe added during the meeting.

Dr. Dashe and her associates conducted a retrospective study at their center to examine the role of ultrasound along with AFP screening for neural tube defects. For this investigation, they reviewed prenatal and neonatal datasets to find pregnancies that were complicated by neural tube defects. Following their standard protocol, Dr. Dashe’s team offered AFP screening between 15 and 21 gestational weeks, and specialized ultrasound for patients with an AFP of at least 2.5 multiples of the median (MOM).

For patients with an AFP of 2.00-2.49 MOM, standard ultrasound was performed. Investigators identified 68 singletons with neural tube defects, 60 of which were identified prenatally.

Clinicians performing AFP screening in 33 study patients. An AFP elevation of at least 2.50 MOM occurred in 22 patients (67% sensitivity). Among patients with an AFP of less than 2.50 MOM, the AFP calculation did not include ultrasound measurements in eight of the women. Additional ultrasound was performed during the second or third trimesters in 66 women. Using ultrasound and AFP screening, they were able to detect 98% of neural tube defects in these patients.

“Other programs may want to reevaluate their experience with the AFP screening test and how well it detects neural tube defects and ventral wall defects. Over time, having an AFP screening test might become an indication for standard ultrasound, both to improve the accuracy of the test and because these anomalies may be detected by the ultrasound,” Dr. Dashe said.

She noted that her study did not (and could not) perform a cost-benefit analysis, which would differ in different populations. She therefore is not recommending routine ultrasound for this indication.

In addition, Dr. Dashe noted a few limitations of this particular study, pertaining to its retrospective nature and the fact that these results might not be generalizable in other centers.

Fetal decomposition may flag maternal decomposition.

‘Once it’s detected, cardiac monitoring of the fetus should stop until the mom is stabilized.

In a normal pregnancy, blood volume increases 50%-100%. Systemic vascular resistance decreases 20%, and the blood is hypercoagulable. Cardiac output can fluctuate. Respiratory alkalosis may occur. The heart is displaced upward and to the left. The patient will have slight left ventricular hypertrophy. These changes can be seen on echocardiography. There is frequently a left axis deviation due to these changes. There also may be nonspecific ST segment and T-wave changes.

Profound cardiac changes also occur during labor. Systemic vascular resistance can go up 10%-25% with each contraction. “That’s a substantial increase for a patient with a very sick myocardium or those with significant valvular diseases,” Dr. Ivester said.

Women in labor will autotransfuse 300-500 cc every time they contract, especially if they are near term. Cardiac output fluctuates as labor progresses. In early labor (<3 cm), cardiac output goes up about 17%. In the second stage of labor (> 8 cm), cardiac output increases at least 34%.

In a normal pregnancy, blood volume increases 50%-100%. Systemic vascular resistance decreases 20%, and the blood is hypercoagulable. Cardiac output can fluctuate. Respiratory alkalosis may occur. The heart is displaced upward and to the left. The patient will have slight left ventricular hypertrophy. These changes can be seen on echocardiography. There is frequently a left axis deviation due to these changes. There also may be nonspecific ST segment and T-wave changes.

Profound cardiac changes also occur during labor. Systemic vascular resistance can go up 10%-25% with each contraction. “That’s a substantial increase for a patient with a very sick myocardium or those with significant valvular diseases,” Dr. Ivester said. Women in labor will autotransfuse 300-500 cc every time they contract, especially if they are near term. Cardiac output fluctuates as labor progresses. In early labor (<3 cm), cardiac output goes up about 17%. In the second stage of labor (> 8 cm), cardiac output increases at least 34%.

In a normal pregnancy, blood volume increases 50%-100%. Systemic vascular resistance decreases 20%, and the blood is hypercoagulable. Cardiac output can fluctuate. Respiratory alkalosis may occur. The heart is displaced upward and to the left. The patient will have slight left ventricular hypertrophy. These changes can be seen on echocardiography. There is frequently a left axis deviation due to these changes. There also may be nonspecific ST segment and T-wave changes.

Profound cardiac changes also occur during labor. Systemic vascular resistance can go up 10%-25% with each contraction. “That’s a substantial increase for a patient with a very sick myocardium or those with significant valvular diseases,” Dr. Ivester said. Women in labor will autotransfuse 300-500 cc every time they contract, especially if they are near term. Cardiac output fluctuates as labor progresses. In early labor (<3 cm), cardiac output goes up about 17%. In the second stage of labor (> 8 cm), cardiac output increases at least 34%.