Urgent Maternal Mortality Message to Providers

Consider echocardiogram in pregnant or postpartum patients with persistent moderate or severe respiratory symptoms. Initial presentation of PPCM can be mistaken for upper respiratory illnesses. Pregnancy Associated Mortality Review (PAMR) findings.

Florida PAMR Findings:

1999–2017: 10.4% of pregnancy-related deaths in Florida were due to cardiomyopathy
1999–2017: 75.5% of pregnancy-related deaths occurred during the postpartum period

From 2009–2017:
- The percent of pregnancy-related deaths due to cardiomyopathy for non-Hispanic black women was 62.8% versus 26.9% for non-Hispanic white women
- 80.6% of women who died from pregnancy-related cardiomyopathy were either overweight or obese (BMI > 25)

PPCM CRITERIA:
- Idiopathic (no other cause) heart failure characterized by left ventricular (LV) systolic dysfunction
- At the end of pregnancy or during the postpartum period (spectrum of timing)
- Diagnosis of exclusion
- Ejection fraction (EF) generally below 45%
- Left ventricular (LV) dilation not required

RISK FACTORS:
- Social: Advanced maternal age, smoking, malnutrition, increased risk for African-American race
- Medical: Hypertension, diabetes, family history, sleep apnea, obesity
- Obstetric: Gravidity and parity, number of children, labor inducing medications, multiple gestation, family history, preeclampsia

Providers:

Peripartum cardiomyopathy is the development of heart failure in the last month of pregnancy or within 5 months postpartum in the absence of prior heart failure with no identifiable cause and echocardiogram indicative of left ventricular (LV) dysfunction.

SIGNS/SYMPTOMS–ONSET CAN BE EASILY MISSED:
- Marked limitation of physical activity; comfortable at rest; less than ordinary activity causes fatigue, palpitation or dyspnea
- Unable to carry on any physical activity without symptoms of heart failure at rest; if any physical activity is undertaken, discomfort increases
- Arrhythmia/Cardiac Arrest
- Women with PPCM most commonly have dyspnea, dizziness, chest pain, cough, neck vein distention, fatigue and peripheral edema

For more information, contact:
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During Pregnancy or Postpartum:
Women should go to the hospital if they cannot breathe or have severe shortness of breath because they could have Peripartum Cardiomyopathy (PPCM).
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DIAGNOSIS
▪ Early diagnosis is essential—watch for early signs and symptoms and a decline in function
▪ Echocardiogram, the primary diagnostic test, to identify left ventricular systolic dysfunction
▪ Differential Diagnosis: myocardial infarction, amniotic fluid embolism, severe preeclampsia, pericarditis, pulmonary thromboembolism, myocarditis, sepsis, drug toxicity, metabolic disorders, and aortic dissection
▪ Postpartum patient with cough, shortness of breath, hypoxemia, and if risk factors raise suspicion, perform a careful physical examination and consider an echocardiogram
▪ For patients presenting with dyspnea, orthopnea, tachypnea, palpitations, syncope, and chest pain, consider obtaining an EKG and a brain natriuretic peptide (BNP)

PAMR Recommendations:
Importance of identifying barriers for participation in treatment for non-compliant patients.

MANAGEMENT
▪ Similar to standard treatment for other forms of heart failure
▪ Avoid routine use of ACE-inhibitors or angiotensin receptor blockers (ARBs) during pregnancy
▪ Collaboration between cardiologists, obstetricians, perinatologists, neonatologists and anesthesiologists is essential

DISCHARGE
▪ Consider transfer to high risk perinatal center and potential for early delivery
▪ Consider prophylactic anticoagulation during pregnancy and immediate postpartum period

PAMR Recommendations:
Important to provide preconception and interconception care for patients with co-morbidities.