The Clinical Nurse Specialist Role in Optimizing Care for this Complex Population

Peripartum Cardiomyopathy

- Identify management strategies for peripartum cardiomyopathy
- Discuss the value of the clinical nurse specialist’s involvement in providing holistic care for patients with complex needs, such as peripartum cardiomyopathy (PPCM)

Peripartum Cardiomyopathy

- Cardiac failure in the last month of pregnancy or within five months of delivery
- Death from cardiomyopathy in the United States increased more than 2-fold from 3% to 7.7% from 1984 to 1997
  - Exact etiology is unclear
  - Risk factors: African American race, multiparity, advanced maternal age, obesity, multiple gestation, cocaine use, preeclampsia
Peripartum Cardiomyopathy

- Early diagnosis is often missed or delayed
  - Profound physiologic adaptations of pregnancy
    - Blood volume and HR increases > increased CO of 40-50% (3rd trimester)
  - Significant overlap of symptoms (heart failure and pregnancy)
    - Fatigue, dyspnea, fluid retention
  - Low incidence of PPCM occurrence

Peripartum Cardiomyopathy

- Treatment is aimed at reducing afterload and preload and increasing contractility of heart
  - Prevent/treat complications
- Non-pharmacologic therapy
  - Na restriction
  - Daily weights and BPs
  - Limited fluid intake
  - Heart failure stoplight assessment

Peripartum Cardiomyopathy

- Pharmacologic therapy
  - Choice of medication is dependent on whether or not the patient is pregnant or breastfeeding
    - Vasodilators
    - Beta blockers
    - Diuretics
    - Digitalis
    - Spironolactone
    - Anticoagulants
    - Antiarrhythmics

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Intra/Postpartum care
- Goal: maintain oxygen delivery sufficient to meet increased maternal and fetal demands associated with labor and delivery
- Vaginal birth with epidural
- Antibiotic prophylaxis for subacute endocarditis
- Continuous cardiac monitoring
- Close fetal monitoring
- Interventions to reduce preload postpartum

Peripartum Cardiomyopathy
- Clinical course of peripartum cardiomyopathy (PPCM) is variable
  - 30%-50%: some degree of persistent cardiac dysfunction
  - 20%: striking fulminant course requiring transplantation
- Breastfeeding is encouraged
  - Positively impacts left ventricle recovery
- Birth control

Peripartum Cardiomyopathy
- Ejection fraction is the strongest predictor of outcome
  - Time to recovery plays important role in predicting long-term outcome
- Future pregnancy
  - Left ventricle function is most reliable predictor of subsequent pregnancy safety
Care of the pregnant and postpartum patient with PPCM presents unique nursing challenges:
- Requires a depth and breadth of knowledge and skill in both perinatal and cardiology fields to provide care throughout the prenatal and postnatal continuum of care.
- Advanced practice nurse consultation and collaboration is essential.

Role of the Clinical Nurse Specialist:
- Formal needs assessment:
  - 98.7% responded that they did not have adequate knowledge, skills or critical judgment to confidently care for a woman with PPCM.
  - 15 point assessment tool guided education:
    - Safe medication use
    - Impact of CV med on pregnant woman/fetus
    - Impact of CV disease on pregnant woman/fetus
    - Impact of pregnancy on CV disease
    - Birth control options for woman with CV disease
    - Impact of CV disease on future childbearing
    - CV and OB APN resources

Role of the Clinical Nurse Specialist:
- Resource Development:
  - Nursing Management Guideline for the Pregnant & Postpartum Patient with PPCM
    - Guideline of assessments, independent and collaborative interventions, surveillance and notification parameters
    - Pregnancy-specific Heart Failure Stoplight
    - Safety Profile of Select Medications During Pregnancy and Lactation
Role of the Clinical Nurse Specialist

- Nursing Education
  - Physiologic adaptations of pregnancy
  - Etiology
  - Risk factors
  - Signs/symptoms
  - Diagnosis
  - Management regime
  - Complications
  - Breastfeeding considerations
  - Prognosis
  - Birth control options
  - Future pregnancy risk

Role of the Clinical Nurse Specialist

- Nursing Education provided
  - Pre-test mean 50.7% (range 30% - 80%)
  - Post-test mean 95.3% (range 90% - 100%)
  - 100% scored >85%

- Consulted for all patients with PPCM
  - Education on safe medication use in pregnancy/lactation and birth control options
  - Reinforce education on disease management

Role of the Clinical Nurse Specialist

- Open lines of communication, consultation, collaboration between heart failure nurses and perinatal CNS
  - Positive outcomes for breastfeeding women
    - Some told to stop breastfeeding
    - Some prescribed medications contraindicated in lactation
    - Some had issues with supply
  - Safe birth control options
In Summary

• Diagnosis of peripartum cardiomyopathy is frightening, unexpected, overwhelming
• Mother must now learn to manage not only the stressors of pregnancy or new motherhood, but also the stressors of this disease
• Requires multi-tiered level of support best facilitated by the clinical nurse specialist