

# The Role of the Nurse in Fetal Arrhythmia Assessment

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Objective:  
 Defining the Role of the Nurse in the Assessment of Pregnancies Complicated by Fetal Arrhythmias.



## RN Assessment to aid in referral

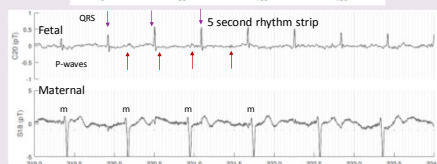
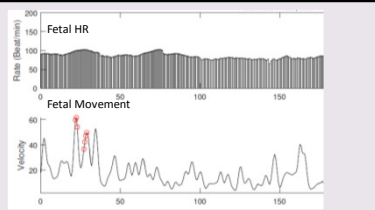
### Key Focus Points:

- Prior pregnancy history
- Maternal and paternal family history
- Medical history including medication use
- Nutrition
- Mental health status/support system
- Multidisciplinary Care Team



## Case Study

- 34 year old G2 P1001 with an EDC of 05/31/19
- Presents to OB for 20 week Anatomy scan
- Fetal Bradycardia Detected – Heart block suspected
  - Dissociation between the atrial and ventricular rates
    - Atrial rate of 130-150 bpm detected
    - Ventricular rate of 70-74 bpm detected
- Referred to MFM
- Referred to Fetal Cardiology → Complete Heart Block (CHB)



## Maternal Prior Pregnancy History

Assessment	Importance
Prior Pregnancy History • No unexplained Fetal loss greater than 20 weeks gestation  • No risk factors-gestational diabetes, preeclampsia, preterm delivery  • Term delivery of a healthy baby girl who is now 14 months old	• Unexplained fetal loss may provide clues for silent or hidden arrhythmias such as Long QT Syndrome (LQTS) or Brugada Syndrome  • Prior risk factors may place the mother and/or the fetus at a higher risk for additional complications



## Family history- Maternal & Paternal

Assessment	Importance
Family medical history <ul style="list-style-type: none"> <li>No Genetic or birth defects</li> <li>No Cardiac structural defects</li> <li>No Arrhythmia/Pacemaker</li> </ul>	<ul style="list-style-type: none"> <li>Increased risk of recurrence for some genetic or cardiac defects</li> <li>Sudden unexplained death in infant/young adult may provide clues to silent or hidden arrhythmias                             <ul style="list-style-type: none"> <li>Fetus has a 50/50 chance of inheriting LQTS</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>No sudden unexplained death in infant/young adult</li> </ul>	



## Maternal Medical History

Assessment	Importance
<ul style="list-style-type: none"> <li>Chronic Medical Conditions                             <ul style="list-style-type: none"> <li>No Diabetes, HTN, Thyroid Disease</li> </ul> </li> <li>Collagen Vascular Disorders                             <ul style="list-style-type: none"> <li>No reported Lupus, Sjogrens, Rheumatoid Arthritis</li> </ul> </li> <li>Positive for SSA Antibody</li> <li>Positive Rheumatoid Factor</li> <li>Diagnosed with Mixed Connective Tissue Disorder</li> </ul>	<ul style="list-style-type: none"> <li>Important to know current treatment, and any serious issues related to these conditions</li> <li>The association of CHB with Collagen Vascular Disorders is well known; ~ 40% of CHB is immune mediated.</li> <li>Incidence of CHB is 2% with a first pregnancy and increases to 16-19% in future pregnancies after having an affected child.</li> </ul>



## AHA Scientific Statement

### Diagnosis and Treatment of Fetal Cardiac Disease A Scientific Statement From the American Heart Association

"In addition, women with both autoantibodies and hypothyroidism are at a 9-fold increased risk of having an affected fetus or neonate compared with those with SSA or SSB alone."

*Circulation* May 27, 2014



## Medication History

Assessment	Importance
<ul style="list-style-type: none"> <li>Current Medications                             <ul style="list-style-type: none"> <li>Prenatal Vitamin</li> <li>Flonase Nasal Spray</li> </ul> </li> <li>Dexamethasone was initiated with diagnosis of CHB</li> </ul>	<ul style="list-style-type: none"> <li>Medications that may lengthen the QT interval <a href="http://www.torsades.org">www.torsades.org</a> Examples: Zofran, ADHD Meds, Zithromax, Pitocin, Opioids, Anti Depressants</li> <li>Other meds that may lower FHR include: Beta Blockers, Sedatives</li> </ul>



## Nutritional Assessment

Assessment	Importance
Nutritional status <ul style="list-style-type: none"> <li>Calcium intake</li> <li>Serum Calcium was low and supplementation was recommended</li> <li>Magnesium and Vitamin D</li> <li>Serum Magnesium and Vitamin D were low and supplementation was recommended</li> </ul>	<ul style="list-style-type: none"> <li>Deficiencies of Calcium, Magnesium, and Vitamin D should be corrected as deficiencies are thought to be proarrhythmic</li> <li><a href="https://ods.od.nih.gov/factsheets/Calcium-HealthProfessional/">https://ods.od.nih.gov/factsheets/Calcium-HealthProfessional/</a></li> <li><a href="https://ods.od.nih.gov/factsheets/Magnesium-HealthProfessional/">https://ods.od.nih.gov/factsheets/Magnesium-HealthProfessional/</a></li> <li><a href="https://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/">https://ods.od.nih.gov/factsheets/VitaminD-HealthProfessional/</a></li> </ul>

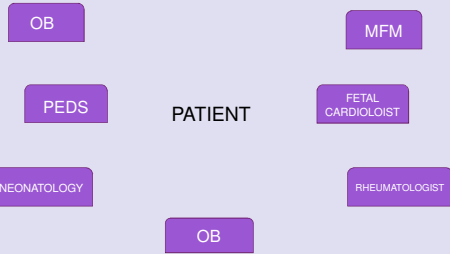


## Mental Health Assessment

Assessment	Importance
Mental status <ul style="list-style-type: none"> <li>No Depression</li> <li>No Anxiety</li> <li>No serious mental health condition</li> <li>Adequate support system</li> </ul>	<ul style="list-style-type: none"> <li>Detection of an abnormality in the fetus increases greatly the amount of stress felt by both the mother and the father of the baby at time of diagnosis as well as at birth</li> </ul>



### MULTIDISCIPLINARY CARE TEAM



**UPDATE:** 32 weeks pregnant  
Weaned off Dexamethasone  
Fetus stable

