Beyond the Basics: The Art and Science of Strip Interpretation

Session 3:
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Wisconsin Association for Perinatal Care (WAPC)

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Notice of Disclosures

• Notice of requirements for successful completion
  – Registrants must attend full session and complete evaluation to receive contact hours
• Conflicts of Interest
  – None to report
• Financial Disclosures
  – None
• Sponsorship or commercial support
  – None
• Non-endorsement of products
  – The speaker does not endorse the use of any particular medications or products as part of this educational session
• Off-label use
  – The speaker may discuss the off-label use of misoprostol and terbutaline as they relate to labor and delivery.
• Expiration date for awarding contact hours
  – 12/31/2014
Before we begin...

• Listen-only mode

• Questions – please ask, please answer!
  – Raise your hand
  – Type into the Question Pane
  – Out of time? Email wapc@perinatalweb.org

• Technical problems: Email Barb Wienholtz at wienholtz@perinatalweb.org

Before we begin...

The content presented today is a case study. Components of this case were chosen based on their applicability to achieve learning objectives for this presentation. Do not assume the patient featured in the case was cared for by the instructor or at the facility at which the instructor is employed.

The discussion will focus on interpretation of the electronic fetal monitoring (EFM) tracings for the purpose of education. At times, the discussion may lead to the care decisions made based on EFM interpretation.

IF the instructor shares details regarding actual or potential care decisions, please note those decisions do not necessarily reflect the opinions of the instructor, a particular provider, the standard of care for any particular institution or facility, or of WAPC.
Objectives

At the conclusion of the session, participants will be able to:

1. Systematically review the electronic fetal monitor strip
2. Identify and categorize the FHR pattern
3. Identify and discuss uterine activity patterns and their influence on the FHR baseline
4. Discuss the pathophysiology related to the tracing patterns identified
5. Discuss interventions for management and documentation of intrapartum fetal heart rate tracings

2008 NICHD Report

The 2008 National Institute of Child Health and Human Development (NICHD) Report of Fetal Heart Rate Monitoring

- Defined standard fetal heart rate nomenclature
- Identified three categories for fetal heart rate interpretation
- Proposed future research
2008 NICHD Report

- **Report endorsed by:**
  - AWHONN-endorsed and incorporated in fetal monitoring curriculum
  - American College of Nurse Midwives
  - American Academy of Family Practice


"Management of Intrapartum Fetal Heart Rate Tracings"

- **Reviewed:**
  - Nomenclature
  - Fetal Heart Rate Interpretation (categories)

- Provided framework for evaluation and management of intrapartum patterns based on categories
- Assessment algorithm for fetal heart rate patterns
- Intrapartum resuscitative measures
- Management of uterine tachysystole
Systematic Review of Case Studies

The following questions are used to evaluate every tracing, followed by specific questions:

1. What is the contraction pattern? (interval, duration, resting tone if appropriate)
2. What is the baseline fetal heart rate?
3. What is the baseline variability?
4. Are there any periodic changes present?
5. Are there any episodic changes present?
6. What are the probable causes of the changes present?
7. When was the last reassuring sign of fetal well-being?

Strip Review Discussion

- Interpretation
- Interventions/Communication
- Documentation in chart
Intervention/Communication

- SBAR
  - Situation
  - Background
  - Assessment
  - Recommendation

Case Information

Patient history:
- 21 year old G1 P0
- Uncomplicated pregnancy
- Prenatal lab work normal
- EFW is AGA
- History of migraine headaches, depression, and a BMI of 47.
Tracing 1

Cervical Exam:
closed, HOC 1-3

Tracing 2
FIGURE 1
Algorithm for management of category II fetal heart rate tracings

Moderate variability or accelerations

Yes
No

Significant decelerations with ≥50% of contractions for 1 hour*

Yes
No

Significant decelerations with ≥30% of contractions for 30 minutes*

Yes
No

Latent Phase
Active Phase
Second Stage

Observe
Cesarean or OVD
Cesarean
Observe

Observe for 1 hour
Persistent pattern

Manage per algorithm

*If these not resolved with appropriate conservative corrective measures, which may include supplemental oxygen, maternal position changes, intravenous fluid administration, correction of hypertension, reduction or discontinuation of uterine stimulation, administration of intravenous magnesium, amniotomy, and/or change in second stage breathing and pushing techniques.
Outcome

Male, 3805 gram infant delivered by cesarean section at 1803.

- Apgars 1/2/3
- Nuchal cord x1.
- Non-vigorous infant, flaccid, no respiratory effort.
- Intubated for meconium suctioning with no meconium below the vocal cords.
- Extubated and given non-invasive positive-pressure ventilation and chest compressions.
- Re-intubated at approximately 15 minutes of life and continued to receive positive-pressure ventilation.
- Subsequently transferred to NICU for right-sided tension pneumothorax, respiratory distress secondary to perinatal depression, possible sepsis.
- Placenta showed moderate chorioamnionitis and 2 vessel cord with moderate funisitis.

References


Discussion

Questions?
Comments?

Remember

• Fax or email attendance list to WAPC
  – fax: 608-285-5004
  – email: wapc@perinatalweb.org
• Evaluation will be sent via email from WAPC. Please complete to receive Continuing Education Credit.
• Continuing Education Certificate will be sent via email upon completion of evaluation.
• Become a member of WAPC! Join online: https://www.perinatalweb.org/n-pay/membership.asp
• Save the date for the 2015 WAPC Annual Perinatal Conference April 26-28, 2015, in Appleton.
Thank-you