

Intrapartum FHR Monitoring Management Decision Model[©]

Confirm FHR and uterine activity

FHR Category?

I

II or III

Is the patient “low-risk”?

Yes

Routine Surveillance

- Every 30 min in the active phase of the 1st stage
- Every 15 min in the second stage

“ABCD”

“A” - Assess oxygen pathway and other causes*
“B” - Begin corrective measures if indicated

FHR Category?

I

II

III

Presence of moderate variability or accelerations
and
Absence of clinically significant decelerations

No or unsure

“C” - Clear obstacles to rapid delivery
“D” - Determine decision to delivery time

Is vaginal delivery likely before the onset of
metabolic acidemia and potential injury?

No or unsure

Heightened Surveillance

- Every 15 min in the active phase of the 1st stage
- Every 5 min in the second stage

Expedite Delivery

Fetal Heart Rate Categories

I

Category I includes all of the following:

- Baseline rate 110-160 bpm
- Moderate variability
- No late decelerations
- No variable decelerations
- No prolonged decelerations

II

Category II includes all tracings not assigned to Category I or Category III

III

Category III includes at least one of the following:

- Absent variability with recurrent late decelerations
- Absent variability with recurrent variable decelerations
- Absent variability with bradycardia for at least 10 min
- Sinusoidal pattern for at least 20 min

A Practical “ABCD” Checklist Approach to FHR Management

“A”

Assess Oxygen Pathway

“B”

Begin Corrective Measures

Lungs

- ☐ Airway and breathing
- ☐ Supplemental oxygen

Heart

- ☐ Heart rate and rhythm
- ☐ Position changes
- ☐ Fluid bolus

Vasculature

- ☐ Blood pressure
- ☐ Volume status
- ☐ Correct hypotension

Uterus

- ☐ Contraction strength
- ☐ Contraction frequency
- ☐ Baseline uterine tone
- ☐ Exclude uterine rupture
- ☐ Stop or reduce stimulant
- ☐ Consider uterine relaxant

Placenta

- ☐ Check for bleeding
- ☐ Exclude abruption

Cord

- ☐ Vaginal exam
- ☐ Exclude cord prolapse
- ☐ Consider amnioinfusion

“C”

Clear Obstacles to Rapid Delivery

“D”

Determine Decision to Delivery Time

Facility

- Confirm:
- ☐ OR availability
 - ☐ Equipment availability

- Consider
- ☐ Facility response time
 - ☐ Location of OR

Staff

- Consider notifying
- ☐ Obstetrician
 - ☐ Surgical assistant
 - ☐ Anesthesiologist
 - ☐ Neonatologist
 - ☐ Pediatrician
 - ☐ Nursing staff

- Consider:
- ☐ Staff availability
 - ☐ Training
 - ☐ Experience

Mother

- Consider
- ☐ Informed consent
 - ☐ Anesthesia options
 - ☐ Laboratory tests
 - ☐ Blood products
 - ☐ Intravenous access
 - ☐ Urinary catheter
 - ☐ Abdominal prep
 - ☐ Transfer to OR

- ☐ Surgical considerations (prior abdominal or uterine surgery)
- ☐ Medical considerations (obesity, hypertension, diabetes)
- ☐ Obstetric considerations (parity, pelvimetry, placentation)

Fetus

- Consider:
- ☐ Estimated weight
 - ☐ Gestational age
 - ☐ Presentation
 - ☐ Position

- Consider:
- ☐ Number of fetuses
 - ☐ Estimated fetal weight
 - ☐ Gestational age
 - ☐ Presentation
 - ☐ Position
 - ☐ Anomalie

Labor

- ☐ Consider IUPC

- Consider:
- ☐ Arrest or protraction disorder
 - ☐ Remote from delivery
 - ☐ Poor expulsive efforts

Two Principles of Fetal Heart Rate interpretation

Environment

Lungs
Heart
Vasculature
Uterus
Placenta
Cord

1. Decelerations (late, variable or prolonged) signal interruption of the oxygen pathway at one or more points

Fetus

Hypoxemia
Hypoxia
Metabolic acidosis
Metabolic acidemia

2. Moderate variability or accelerations exclude hypoxic neurologic injury

Potential Injury

*Other Causes of Fetal Heart Rate Changes

Fetal

- ☐ Fever
- ☐ Infection
- ☐ Medications
- ☐ Anemia
- ☐ Arrhythmia
- ☐ Heart block
- ☐ Congenital anomaly
- ☐ Extreme prematurity
- ☐ Preexisting neurologic injury
- ☐ Sleep cycle

Maternal

- ☐ Fever
- ☐ Infection
- ☐ Medications
- ☐ Hyperthyroidism