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EFM NOMENCLATURE UPDATE

The National Institute of Child Health and Human Development (NICHD) held workshops in 1995 and 1996 for the specific purpose of developing standardized and clear-cut definitions for fetal heart rate (FHR) tracings. The definitions that came from these workshops have now been adopted by the American College of Obstetricians and Gynecologists (ACOG) and the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) also recommended standardized terminology for fetal monitoring in the July 2004 Sentinel Event Alert #30. The purpose for this adoption is to have all care providers using the same terminology for interpretation of fetal monitor strips to ensure safe and consistent patient care.

Transitioning to NICHD

The NICHD definitions were developed primarily for visual interpretation. These definitions apply to a FHR produced by either an external Doppler device or a direct fetal electrode. When interpreting the FHR pattern take into account gestational age, prior fetal assessment, medications, and obstetric and medical conditions.

NICHD Terminology:

Baseline FHR: the baseline FHR is the approximate mean FHR rounded to increments of 5 bpm during a 10 minute segment, excluding periodic and episodic changes, periods of marked variability, or segments that differ by more than 25 bpm.

In documenting the baseline rate in any 10 minute window, the minimum baseline duration must be at least 2 minutes, or the baseline is charted as indeterminate.

Baseline Variability: Absent-amplitude range undetectable
Minimal-amplitude range detectable but 5 bpm or fewer
Moderate (normal)-amplitude range 6-25 bpm
Marked-amplitude range greater than 25 bpm

No distinction is made between short-term and long-term variability because in assessing they are viewed as a unit.

Accelerations: visually apparent abrupt increase in FHR baseline (onset to peak is less than 30 sec). A prolonged acceleration lasts 2 min or more but less than 10 min.
32 wks or >: acceleration has a peak of 15 beats/min or more above baseline, with a duration of 15 sec or more, but less than 2 min.
32wks or <: acceleration has a peak of 10 beats/min or more above baseline, with a duration of 10 sec or more, but less than 2 min.

Bradycardia: baseline FHR less than 110 bpm.

Tachycardia: baseline FHR greater than 160 bpm.

Early Deceleration: visually apparent, gradual decrease in FHR with return to baseline associated with uterine contraction. Onset to nadir 30 sec or more and nadir occurs at the same time as peak of contraction.

Late Deceleration: visually apparent, gradual decrease in FHR with return to baseline associated with uterine contractions. Onset, nadir, and recovery of the deceleration occur after the beginning, peak, and end of the contraction.

Variable Deceleration: visually apparent, abrupt decrease in the FHR below the baseline Onset to nadir less than 30sec. The decrease in FHR is 15 beats/min or more, with a duration of 15 sec or more, but less than 2 min.

Prolonged Deceleration: visually apparent decrease in the FHR below the baseline Deceleration is 15 beats/min or more lasting 2 min or more, but less than 10 min from onset to return to baseline.

Definitions to keep in mind

- Periodic: patterns that are associated with uterine contractions (i.e. an early deceleration)
- Episodic: patterns that are not associated with uterine contractions (formerly known as nonperiodic)
- Nadir: the lowest FHR value in a deceleration or depth of a deceleration; in EFM it is visually the lowest point in the deceleration curve.

Things to Remember

- Not all FHR patterns will meet the NICHD definitions exactly.
- Choose the one definition that most closely describes the FHR pattern.
- Variable decelerations inherently vary in timing, shape, and duration and should be described as variable decelerations *without* additional clarification of atypical features (i.e. variable deceleration with a late component).
- Decelerations are defined as *recurrent* if they occur with $\geq$50% of contractions in any 20 minute segment.

(*References available upon request*)

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