SARASOTA MEMORIAL HOSPITAL

NURSING PROCEDURE

TITLE: NONSTRESS TESTING (NST) VIBROACOUSTIC STIMULATION (VAS) (OBS05)

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ISSUED FOR: Nursing RESPONSIBILITY: RN, Obstetrical Services

PURPOSE: Antepartum assessment of fetal well being.

OBJECTIVE: To establish guidelines for performing the procedure for non-stress testing for gravid patients ≥ 28 weeks gestation.

EQUIPMENT: Electronic fetal monitor (EFM)
Vibro Acoustic Stimulator (VAS) device or Artificial Larynx

KNOWLEDGE BASE: The NST is based on the premise that the normal fetus moves at various intervals and that the central nervous system and myocardium responds to movement with accelerations of the fetal heart rate.

Accelerations of the fetal heart rate during fetal activity is a sign of fetal well-being.

Baseline fetal heart rate:

**Reactive NST** - The fetal heart rate is monitored for two accelerations (15 beats above baseline lasting 15 seconds from the time the FHR leaves the baseline to the time it returns to the baseline) in 20 minutes. Gestation < 32 weeks, two accelerations of 10 beats per minute lasting 10 seconds is considered a reactive test. Specific indicator for fetal well-being. A reactive NST indicates fetal well-being and a than a 1% chance of fetal death within 1 week of a reactive NST.

**Nonreactive NST** - No accelerations in allotted time. The tracing does not meet the Reactive NST criteria as stated in this procedure. This is not necessarily an ominous sign, it indicates a need for further testing such as an fetal ultrasound for a Biophysical Profile (BPP).

**Acoustic Stimulation (Vibroacoustic Stimulation)** - indirect method of assessing the acid-base status of the fetus when fetal accelerations do not occur spontaneously. The goal is to elicit accelerations as desired to meet criteria for Reactive NST.

PATIENT EDUCATION:
1. Reinforce the provider's rationale for test.
2. Explain procedure.
3.
PROCEDURE:
1. Obtain provider order
2. Ensure proper patient identification
3. Reinforce provider’s explanation of test
4. Have patient lie in a semi-fowler’s and lateral position.
5. Apply EFM and establish the FHR baseline.
6. Monitoring is continued for at least 40 minutes or until criteria for reactivity is met. If the fetal heart rate (FHR) does not meet criteria for reactivity, the strip is deemed non-reactive.
7. Acoustic stimulation (vibroacoustic stimulation) can be applied to elicit accelerations after a 10 minute baseline fetal heart rate is established.
8. If there are no spontaneous accelerations, apply an artificial larynx over the fetal head and stimulate for 1 to 2 seconds
9. Re-stimulate if no acceleration occurs within 10 seconds (may be repeated up to 3 times), duration of stimulus up to 3 seconds
10. Continue to monitor
11. If the FHR strip meets criteria for reactivity, the NST is complete.
12. If not reactive in 20 minutes, obtain Biophysical Profile (BPP).
13. Notify provider of non-reactive NST and BPP results.

DOCUMENTATION: Document the following in EMR:

a. Outcome of NST testing- reactive/non-reactive
b. If VAS used- documentation should include a description of the tracing prior to VAS, duration of stimulus and response of fetus.
c. Strip to be reviewed by provider at bedside or two RNs with documentation in electronic medical record.
d. The provider will be notified of NST results via a FAX with the expectation that the provider will review the strip within 48 hours.

REFERENCE:


Revising Author(s):

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