

The logo of Galgotias University is a circular emblem with three curved, overlapping bands in shades of orange, yellow, and blue, creating a stylized 'G' shape.

CONTRACTION STRESS TEST

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Topics to be covered

- Introduction
- Definition
- Timing
- Purpose
- Procedure of CST
- Indication and contraindication
- Interpretation
- Complications
- Roles and responsibility of midwife

INTRODUCTION:

The Contraction Stress Test (CST) also called a stress test or an oxytocin challenge test, may be done during pregnancy to measure the baby's heart rate during uterine contractions. Its purpose is to make sure the baby can get the oxygen he needs from the placenta during labor.

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DEFINITION :

A contraction stress test (CST) is performed near the end of pregnancy to determine how well the fetus will cope with the contractions of childbirth. The aim is to induce contractions and monitor the fetus to check for heart rate abnormalities using a cardiotograph. A CST is one type of antenatal fetal surveillance technique.

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TIMING OF CST:

Women may get a contraction stress test at 32 weeks or later. Before that, the test may not be safe. The number of times you need the test depends on your situation.

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PURPOSES:

- To assess the ability to cope with the continuation of high risk pregnancy.
- To determine the projected ability of fetus to withstand the stress the stress of labor.

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INDICATIONS

- Post maturity
- IUGR
- History of previous stillbirth
- Meconium stained amniotic fluid obtained at amniocentesis.
- Falling or abnormal estriol values.
- Gestational Diabetes.
- Chronic hypertension
- Chronic lung disease
- Sickell cell disease

CONTRAINDICATION:

- Vaginal bleeding.
- Multiple gestation.
- Previous classic uterine incision(caesarian section)
- Hydramnios
- Premature rupture of membrane.

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PROCEDURE

- The woman bladder should be emptied (to promote comfort and avoid disruption).
- Give either a semi fowler's or left lateral position (to avoid supine hypotension)
- The mother blood pressure should be checked to obtain a baseline recording.

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NIPPLE STIMULATION TEST:

- This is the procedure that relies on endogenous release of oxytocin following nipple stimulation, and is conducted by the patient.
- At the beginning of the test warm wash cloths are applied to the breast.
- Zinc oxide(A+D) ointment is applied to the nipples to prevent the soreness.
- The woman then stimulates her nipple by either rolling them or gently pulling them.
- Stimulation is initially unilateral.

- If contraction are still inadequate, intravenous oxytocin is used.
- Nipple stimulations provides adequate contractions approximately in 75% of women using this method.

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OXYTOCIN CHALLENGE TEST:

- The administration of oxytocin to induce contractions is called an oxytocin challenge test or oxytocin contraction test(OCT).
- A venipuncture is done by an intravenous line is established, and a very dilute solution of oxytocin 30 IU diluted in 500 mL IV solution controlled by an infusion pump, is administered via a piggyback setup to another bag of intravenous solution.
- To rate of infusion is increased at intervals until the contractions are occurring at a frequency of at least 3 in a 10 minutes period and lasting at least 30 second.
- The recording is then interpreted and the infusion stopped.

- Both the monitoring and the intravenous solution, without oxytocin in it, are continued until the contractions have diminished to their baseline activity
- This is to assure that the oxytocin has not put the woman into labor without knowing about it.

COMPLICATION:

- It may cause labor to start sooner than your expected delivery date.
- It may cause contractions that go on for a long time. This may cause problems with your baby.
- The contractions usually stop when the oxytocin is stopped.
- You may get a medicine to stop the contractions.
- In very rare cases, the contractions don't stop. If that happens, your doctor may suggest delivery.

CARE AFTER PROCEDURE

- Clean the ointment that is used during nipple stimulation procedure.
- Make the client in comfortable position.
- Replace all article to the utility room.
- Wash hands
- Record the date and time of CST
- Document the recording.

ROLES AND RESPONSIBILITY OF MIDWIFERY:

- Explain the procedure to the patient.
- Provide privacy.
- Maintain a safe, comfortable position for the client.
- You may be asked to not eat or drink for 4 to 8 hours before the test.
- Empty your bladder before the test.
- If you smoke, stop for 2 hours before the test. Smoking can lower your baby's activity and heart rate.
- You will be asked to sign a consent form that says you understand the risks of the test
- Patient should be lie in semi fowler's or left lateral position.

Summary

Contraction stress test assesses fetal placental functioning and the fetus's projected ability to cope with the continuation of high risk pregnancy and the stress of labor. It aid the physician in selecting the optimal time for delivery of a high risk fetus.

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