Maine Medical PARTNERS Women's Health

A department of Maine Medical Center

Chorionic Villus Sampling

Qualifications:

Patients desiring chromosome analysis between $10^{0/7}$ and $13^{6/7}$ weeks' gestation

Preparation:

1. A genetic consult with a genetic counselor should be performed prior to the ultrasound appointment.
2. Consent form should be signed.
3. Patient's blood type and Rh documented.

Method

1. Transabdominal ultrasound and transabdominal or transcervical procedures performed.
2. Procedure is performed under continuous ultrasound guidance.
3. Personal protective wear should be used in accordance with the existing policy.
4. Disinfection of the equipment should be performed in accordance with the existing policy.

Reporting:

Utilize the existing computer based report.

Imaging:

First trimester examination performed.

Procedure:

Tray (transabdominal)

1. Set up under sterile technique
2. Supplies:
    - 2-Steri drapes
    - 1-10 cc luer lock syringe
    - 1-20 cc luer lock syringe
    - CVS sampling needles
    - 1 plastic CVS handle
    - Betadine
    - 2-thawed transport media
    - Surgical gloves (size dependent on physician)
    - Light source

Tray (transcervical)

1. Set up under sterile technique
2. Supplies:
    - 1 Steri drape
    - 1 CVS catheter
    - 1-10 cc luer lock syringe
    - 1 ring forceps
    - 1 single tooth tenaculum
    - Betadine
    - 3 packages of sterile 4 x 4's
    - 3-sterile sponge stick
    - 1-medium sterile Graves speculum
    - 2-thawed transport media
    - Surgical gloves (size dependent on physician)
    - Light source

Rhogam is administered post procedure to those patients who are Rh negative unless otherwise directed by physician.

Samples will be sent to Integrated Genetics.

Copy of the requisition should be kept in the chart as well as given to the genetic counselor.

The patient should be given a "post CVS instruction sheet."

Chorionic Villus Sampling

Chorionic villus sampling (CVS) is available via Maine Medical Center's Division of Maternal-Fetal Medicine.

CVS- what is it?

CVS is a procedure that biopsies the early developing placenta between 10 0/7 weeks and 13 6/7 weeks' gestation. Since the fetus and placenta develop from the same zygote, the placental and fetal cells as a rule, demonstrate the same chromosomal makeup. CVS is successful in obtaining sufficient tissue for diagnosis over 95% of the time.

To whom can CVS be offered?

Patients otherwise offered invasive prenatal diagnosis via amniocentesis may wish to consider CVS. These include but are not limited to;

1. Women who are 35 or older at the time of delivery
2. Those with a previous pregnancy with a chromosomal abnormality
3. Fetuses at risk for an inherited disorder potentially diagnosable by DNA analysis (example-cystic fibrosis and sickle cell disease).
4. Abnormal aneuploidy screening results
5. Any patient requesting procedure after counseling

What are the benefits of CVS?

The major benefit of CVS is providing the patient with accurate results very early in pregnancy in contrast with traditional amniocentesis.

What are the risks of CVS?

The procedure is quite safe with a miscarriage risk of 0.8 %, insignificantly different from the loss risk associated with amniocentesis of 0.5%. Past concerns regarding limb reduction and facial defects appear to have been overstated and related to CVS procedures done before 10 0/7th weeks of gestation. Current thought holds that the risk of these complications is approximately 1 per 3,000 procedures, similar to the naturally occurring background risk. In addition, approximately 1% of CVS chromosome results showed two separate cell types (mosaicism). Although most mosaicisms found by CVS are confined to the placenta, amniocentesis is routinely offered for further clarification at approximately 16 weeks' gestation.

How is CVS performed?

CVS can be performed either transabdominally with a needle, or transcervically with a catheter. The approach is selected based on technical factors such as placental location and uterine position. Both routes are equally safe, employ sterile technique, and require ultrasound guidance.

How long does it take to get results?

Fetal chromosomal analyses are usually complete within 7-10 days following the procedure. Other tests may take longer depending upon their nature.

What else should I know about CVS?

All patients for CVS must first be provided with genetic counseling and an ultrasound evaluation for dating, viability, as well as placental and uterine position. Rh negative, unsensitized patients will receive Rhogam immediately following the procedure.

What follow up should patients receive after CVS?

We recommend that the patients be offered maternal serum AFP screening and targeted ultrasound examination in the second trimester, as CVS does not evaluate fetal anatomy.

How do I refer a patient for CVS or for further information on CVS?

Please call Maine Medical Partners Women's Health, Division of Maternal-Fetal Medicine office at (207) 771-5549 to schedule your patient between 10 0/7 weeks and 13 6/7 weeks' gestation for CVS.