SALINE INJECTION ABORTION (AMNIOCENTESIS) 14-20 weeks.

When Used

- Usually between 14 or 15 and 20 weeks. The amniotic sac is too small before then.
- D & C and Vaccum Aspiration cannot generally be used after 12 weeks because:
  - Walls of the uterus have become thin and soft as the uterus stretches. There is danger of perforation.
  - Fetus is getting quite large, and there is danger of damaging the cervix.
  - Placenta is quite large and the flow of blood through it is increasing. There is risk of serious bleeding.
- Contraindications: Cardiac disease, renal disease, CNS disease, Hemoglobinopathes, severe Diabetes, 2 or more Caesarian Sections, In these cases a hysterotomy must be done.

PROCEDURE

Prep:

1. Determine hemotocrit (Blood test which measures density of blood cells.) Provides baseline for replacement in case of high blood loss.
2. Rh type to determine if Rhogram is necessary.
3. Enema is sometimes given if the woman has not had a bowel movement for a long time.
4. Intravenous 5% dextrose begun in case there are complications requiring dextrose as a treatment. See: Possible Complications.

Saline Injection:

1. Local anaesthetic is given at the site of injection. The anaesthetic used is very light and lasts only about half an hour.
2. Spinal needle is inserted into amniotic sac.
3. Check to make sure the needle is in the amniotic sac by withdrawing a small amount of the fluid and testing.
4. Approximately 250 ml. of amniotic fluid are withdrawn.
5. Test dose of saline solution is injected. Watched for symptoms that would indicate intravascular injection.
6. Remaining 200 to 240 ml. of saline solution is injected.
7. Alternate Method:
   - Withdraw some amniotic fluid, inject some saline solution. Repeat this until enough saline is injected.
   - Just inject saline solution after testing to be sure the needle is in the amniotic sac.
8. May be some cramping for approximately one hour.

SALINE INJECTION ABORTION (cont.)

9. Fetal death occurs within 1 hour of injection. The saline solution causes fetal dehydration, and water diffuses into the sac from the fetal and placental tissue.

Note: Sometimes the doctor can't find the amniotic sac after 3 tries. The woman comes back after about 3 days for 3 more tries. If it still doesn't work, she gets either a hysterotomy or a D & C.

Latency Period

1. Woman returns to her bed. Food and activity are allowed as desired,
2. Record is kept of fluid intake and urine output to discover water intoxication if it should occur. See: Possible Complications.
3. Oxytocin Drip: This is a hormone present in our bodies. Fetal death causes oxytocin to be secreted. It aids contractions. Different doctors begin it at different times. The possibilities are:
   A. Begin at the time of injection (but of administered for a long time there is danger of water intoxication.)
   B. Wait until cramps begin or membranes rupture.. The body is more sensative to oxytocin once contractions have begun.
   C. Begin it automatically after a certain number of hours even if contractions have not started.
4. The time at which contractions begin varies with the individual woman. Will probably be 24 to 48 hours, but could be longer or shorter.

Note: In rare cases the saline solution does not induce contractions.

Labour: See notes on breathing exercises.

1. Time of labour varies tremendously. Usually 5 to 24 hours. A Woman who has had a child will probably have a shorter labour.
2. Labour begins with cramps, like menstral cramps, and works up in intensity and closeness of contractions.
3. Medication can be given to relieve pain, but not too early as it could stop labour.
4. Woman is moved to caseroom when contractions become painful and close. This is usually in a room by herself, in a bed with sides.
5. Should have ice chips and a cold cloth for her forehead. A friend can manage this.
6. Breathing exercises help, but the pain relievers can make it difficult for the woman to concentrate, so a friend is needed to coach her.
7. Labour is very tiring. Many women fall asleep between contractions towards the end of labour. This again means a friend to coach her breathing when she wakens.
8. The cervix dialates to about 4 cm. before abortion occurs, as opposed to about 9 cm. for a full term delivery.
9. One of us may be able to be with a woman if we have permission from the doctor.

SALINE INJECTION ABORTION (cont.)

Delivery

1. Should be assistance from the nursing staff in bearing down to deliver the fetus, but most women abort alone.
2. The fetus and the placenta may be delivered close togwther.
3. If the placenta is not fully delivered with the fetus:
   A. The woman is watched for the next 2 hours, and the placenta is usually expelled within that time. This entails contractions but no bearing down.
   B. The woman is not allowed to eat or drink at this time as a D & C may be done to remove the placenta.
   C. If the expulsion of the placenta is incomplete or just doesn't happen, a D & C will be done within 1 to 3 hours. A general Anaesthetic is used for the D & C.
   D. The D & C is necessary in about 10% of the cases.

POSSIBLE COMPLICATIONS

1. Intravascular Injection (Injection of saline solution into the blood stream.) Hypernatremia will cause severe dehydration and increased intravascular volumn. Possible symptoms: Within one hour of the injection, flushed face, dry mouth, heat sensation, ringing in the ears, rapid heart beat, severe headaches. Treatment: Stop injection and give 5% dextrose intravenously.
2. Peritoneal Spill (Saline spilling into the oeritoneal cavity, which can result in hypernatremia)
   Symptoms: (within 15 minutes) severe abdominal pain, rapid hard beat, extreme thrist(should drink as much as possible.)
   Treatment: 5% dextrose intravenously.
3. Bladder Injection (Saline solution injected directly into bladder)
   Symptoms: Back ache, burning, urgency.
   Treatment: Bladder irrigated with saline.
4. Water Intoxication (rare) A large dose of oxytocin may cause this. Oxytocins have antidiuretic properties (decreased flow of urine.)
   Symptoms: edema (fluid retension causing swelling), drowsiness, headaches, mental confusion, oliguris (increased frequency of urination, with little actuall urination.)
   Treatment: 1000 cc lactated Ringers solution with oxytocin intravenously. Patient will pee a lot within 2 hours.
5. Retained Placenta The placenta is generally expelled with 1 or 2 hours. or a D & C must be performed. Must watch for hemorrhage from the time the fetus is expelled.
6. Amniotic Fluid Embolism Obstruction of blood vessel by amniotic fluid.

POST ABORTION CARE

1. No douching, tampons, tub baths, or intercourse for 4 weeks.
2. Check up after 4 weeks.
3. Slight spotting for 1 week is normal.
4. Danger signs (See a doctor immediately)
   A. Infection: heavy cramping, nausea, vomitting, fever
   B. Hemorrhage: heavy bleeding & clotting.

HYSTEROTOMY

Hysterotomy is a Caesarian operation done under general anaesthetic in which the fetus and placenta are removed through an incision in the abdominal wall and the uterus. This is done between 12 and 20 weeks, sometimes later. The hysterotomy differs from a Caesarian section in that the incision is made near the top of the uterus (wjich stretches first as the fetus grows.) For a full-term Caesarian Section the incision is made at the top of the uterus, and last part of the uterus to be stretched.

A hysterotomy means that all future babies will have to be delivered by Caesarian Section. If the woman definately does not want more children, this is an easy time to perform a tubal ligation. However, this may be an inappropriate time to consider sterilization if the woman has not considered it earlier because of the emotional upheaval associated with becoming pregnant and having an abortion.

A hysterotomy is major surgery required a hospital stay of approximately 1 week, and a long recuperation period. This is not to be confused with hysterectomy, which means removal of the uterus as opposed to removal of the contents in the uterus.