Obstetric Procedures

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Content:

- ***Procedures for fetal prenatal diagnosis***:

1. Ultrasound.
2. Amniocentesis.
3. Chorion villous sampling.
4. Fetal blood sampling.
5. External cephalic version.

- ***Operative vaginal delivery***:

1. Forceps.
2. Ventouse.

- ***Cesarean section.***

Ultrasound:

Types:

1. Tran abdominal.
2. Transvagina

Guidelines for first trimester:

1. Location of gestational sac.
2. Gestational age by CRL (one of most accurate indicators of fetal age).
3. Presence or absence of fetal life.
4. Fetal no.
5. Evaluation of the uterus (include cx) and adnexal structures (fibroid and ovarian cyst.

Guide for second and third trimesters:

1. Fetal life , number , and presentation.
2. An estimate of the amount of amniotic fluid (< > N) .
3. Placenta location.
4. Assessment of gestation age.
5. Evaluation of the uterus and adnexal path.
6. Fetal anatomy.

Amniocentesis:

Def: it is a technique for withdrawing amniotic fluid from the uterine cavity using a needle via atransabdominal approach.

Indications

1. Diagnostic indications ex. Prenatal genetic studies.
2. Ass. Fetal lung maturity.
3. Fetal infection.
4. Degree of hemolytic anemia.
5. Blood or platete type.
6. NTD
7. coaglopath.
8. Therapeutic procedure.(remove excess fluid).
9. Hemoglobinopath.

Cont. Amniocentesis:

- Gestation age:

  from 11 to term.

Complications:

1. Rupture of membranes .
2. Fetal injury (direct ,indirect).
3. Infection . (hepatitis ,toxo , CMV, HIV,).
4. Fetal loss 0.5 -1 %. (significantly affected by maternal age).
5. Amnionitis 1/1000.

Chorionic villus sampling:

- Dif: small samples of the placenta are taken sent for genetic analysis , provides preliminary cytogenetic results within 48h and final culture result within 7 days.
- Time: 10 -12 weeks .
- Complications : similar to amniocentesis .
- Approach:

  1.Transcervical.

  2.transabdominal. (depend on placenta site) .
- ***Contraindications:***

  1.Vag. Bleeding.

  2.Active genital tract infection.

  3.Extreme ante – or retroflexed uterus.

- ***Indications (CVS):***

1. Maternal age : 35 yo at delivery .
2. Previous child with non- disjunctional chromosome abn.
3. Parent is carrier of balanced translocation or other chromosome disorder.
4. Both parents are carriers of autosomal recessive disease.
5. Women who are carriers of a sex – linked disease .
6. Positive first – trimester screen for trisomy 21 or 18 .

Fetal blood sampling (cordocentesis)

- ***Indication:***

1. Assessment and treatment of confirmed red cell or platelet alloimmunization.
2. Analysis of non – immune hydrope.
3. Karyotyping of fetal blood and congenital infection.
4. Analysis of metabolic & hematological status.

- ***Procedure:***

The operator punctures the umbilical vein , usually at or near its placental origin.

Complications: (cordocentesis)

1. As amniocentesis.
2. Cord hematoma.
3. Cord vessel bleeding.
4. Fetal – maternal hemorrhage.
5. Fetal bradycardia.
6. Fetal death.

Operative vaginal delivery:

- ***Forceps:***

Parts:

1. Blade.(cephalic ,pelvic curve)
2. Shank.
3. Lock. (sliding lock , English lock)
4. Handle.

Function of forceps:

1. Traction.
2. Rotation.
3. Both.

Cont. Forceps:

- ***Classification:***

1. Outlet forceps.
2. Low forceps.
3. Midpelvic forceps.
4. High forceps.

- ***Indications for forceps:***

1. Heart disease , pulmonary inj. Or compromise.
2. Intrapartum infection.
3. Exhaustion.
4. Prolonged second stage of labour.
5. Certain neurological condition.
6. Non- reassuring CTG.
7. Prolapsed cord , premature separation of placenta.

Pre-requisites for forceps application:

1. Head engaged.
2. Vertex presentation.
3. Known position.
4. Fully dilated cx.
5. Mb ruptured.
6. Role out CPD.
7. Local or regional anesthesia.
8. Bladder should be empty.
9. Expert operator.

Complication of forceps:

1. Lacerations and episiotomy.
2. Urinary dysfunction .
3. Rectal & anal dysfunction.
4. Febrile morbidity.
5. Low Apgar score.
6. Cephalohematoma.
7. Caput.
8. Facial nerve injury.
9. Fetal truma (Erb palsy ,fratured clavicle).
10. Retinal hemorrhage.

Vacuum Extraction (Ventouse):

- ***Types:***
  - Metal cup vacuum.
1. Soft cup vacuum (silastic cup).

- ***Indications &prerequisites:***

as forceps.

- **Contraindications:**

1. Inexperience.
2. Inability to ass. Fetal position.
3. High station.
4. Suspicion of CPD.
5. Non vertex presentations.
6. Fetal coagulopathy.

Cont. complication of ventouse:

7. Macrosomia.
8. Recent scalp blood sampling.

Vacuum extraction is reserved for fetus 34 weeks or older.

Complications:

- Scalp lacerations & bruising.
- Subgaleal hematoma.
- Cephalohematomas.
- Intracranial hemorrhage.
- Neonatal jaundice.
- Subconjuctival hemorrhage.
- Clavicular fracture.

Cesarean Delivery (C/S):

- ***Indications:***

1. Labor dystosia.
2. Fetal distress.
3. Breech presentation.
4. Multiple gestations. Prior c/s.

- ***Utrine segments:***

1. Upper uterine segment .(active seg.) contacts ,retracts ,expels fetus ,mainly muscular.
2. Lower uterine segment .(passeve seg.) dilate ,expande ,thinned –out . Fibromuscular .

So lower & upper seg. Differ anatomically & physiologically.

Technique of c/s:

- ***Skin incision:***

1. Vertical incision.
2. Transverse incision (pfannenstiel incision).

- ***Uterine incisions:***

1. Lower uterine segment transversely incision.
2. Lower uterine segment vertical incision (may be used).
3. Upper uterine segment vertical incision (classical incision) . Rare.

Indications for classical c/s :

1. Can not expose lower seg.
2. Transverse lie ,large fetus ,rup. Mb.

Cnt. Indecation of classical c/s:

3.Some cases Placenta previa (ant.) .

4. Some cases small ,breech ,premature .

5. Some cases *massive obesity* when upper seg. Accessible.

Advantage of LSCS:

1. Easier to repair .
2. Less likely to rupture during subsequent pregnancy .
3. Dose not promote adherence of bowel or momentum at the incision line .
4. Less bleeding .

Complications of cesarean section:

Increase maternal mortality &morbidity :

1. Increase maternal death.
2. Bleeding.
3. Infections.
4. DVT.
5. Adhesions.
6. Pain.

Vaginal birth after prior cesarean:

- ***Benefit:***

1. Short stay at hospital.
2. Less blood loss .
3. Fewer transfusion.
4. Fewer infections.
5. Fewer DVT.

- ***Risk of VBAC:***

1. Uterine rupture.
2. Hysterectomy.
3. Increase morbidity .(b.tran.).
4. Fetal death or damage.

Cont. VBAC:

1. LSCS.
2. Institute ER C/S with anest &physician immd. Available.
3. NO contraindications for vag. Delivery.
4. No other uterine scare.

External cephalic version : (ECV)

- Definition: It is a procedure by which an obstetrician turns the baby from the breech to the cephalic position by manipulating the baby through the maternal abdomen .
- The procedure increases the chance of cephalic presentation at onset of labor and decreases the rate of cesarean delivery.

Cont. ECV :

- AGOC recommendation ECV shoud be available and offered to women with breech presentation at term .
- Risk : Discomfort , ERC/S , Transient bradycardia is less common ,placental abruption , premature labor .
- Cost : cost-effective .
- Contraindications :

1. Indications for c/s .
2. Rupture membranes .

Cont. Contraindications ECV :

3. No reassuring CTG.
4. Hyper extended fetal head.
5. Significant fetal or uterine anomaly .
6. Abruptio placentae .

Relative contraindications :

1. Previous c/s .
2. Maternal hypertension, obesity .
3. IUGR.

Cont. ECV:

- Preprocedure requisites: U/S , Bladder empty .
- Timing : completed 36 weeks of gestation .
- Women who RH – negative receive anti-D immunoglobulin .
- If the procedure is un successful or the baby reverts to breech , a retrial of version to be considered .