

Taking care of patients who have non-reassuring pattern

- A non-reassuring pattern is:
 - no variability
 - less than 2 accelerations
 - decelerations
- In antepartum setting, you are looking at variable and accelerations
- Parameters for 28-32 weeks is different than 32 weeks or greater
- What about in labor?
 - looking for late decels (these are bad)
 - variability is THE most important thing!
 - moderate variability shows the CNS is intact
 - absent variability is no bueno...this would be a big issue if it was moderate before and now has become absent. If pt had medication, then this may not be so much of a concern b/c the meds affects the baby.
 - minimal may be bad (probably is)
 - marked is also not good
- Category 1: has variability, maybe a random decel (but most likely none), has accelerations
- Category 2: starting to get into a little gray area; physician can proceed forward with usual plan of care; moderate or minimal variability; may have recurring decels (of any type);
- Category 3 : absent or minimal variability with repetitive late decels; baby is not coping
- What's the first thing you would do if pt had repetitive variable decels?
 - reposition, increase IV, put Oxygen on mom, call doc (You will reposition b/c the variable decels are d/t cord compression).
 - You would give O2 if she had decreased variability (according to Dr. Ferguson)
 - Baby can get late decels from mom lying on her back (so position change), or from having low BP (so give IV bolus).

Things you need for precipitous birth

- IV
- Oxygen
- BOA kit (Birth on Arrival kit)

What kind of risks are involved with precipitous birth?

- Tearing at perineum
- Hemorrhage d/t lacerations and such
- Pneumothorax (not in book!). This can happen to baby when he takes his first breath.
- Low APGAR scores
- Meconium aspiration
- Brachial palsy

What is considered a post-date birth? 42 weeks...

- These women will get misoprostal or pitocin induction (make sure contractions aren't too close together, monitor for fetal distress; mom will need an epidural b/c pitocin hurts; potential post-delivery problems for baby r/t epidural; hemorrhage can happen PP b/c sites are saturated with pitocin already and mom isn't going to contract very well; non-reassuring patterns b/c BOW broken causes temps to go up, resting tone too high and contractions too close together can cause fetal distress;
 - High-Dose and Low-Dose Pitocin
 - Start out at around 4, and go up in "jumps" to get woman in labor...or can go up gradually I guess? See book. Basically RNs utilize a protocol for this, but the idea is to start low and titrate accordingly.
 - Baby is most likely going to be large with post-date moms
 - Shoulder dystocia, brachial palsy (whatever it's called)
- May have amniotomy (infection)
- C/S...and all the complications
- Maternal anxiety

Twin presentation

- One can be vertex and the other can be breech
- What they can do for the breech twin is do an internal rotation of the baby. This is usually the 2nd baby.

Macrosomia (> 4500 grams)

- Shoulder dystocia
- hemorrhage
- Don't know if pelvis is adequate, mom may need C/S
- McRobert's maneuver if head comes out and shoulder doesn't.
 - Pull mom's legs back to open pelvis more, this can help get baby out; also put pressure above pubic bone to dislodge the shoulder (but can break the clavicle)
- U/S is not reliable in establishing fetal weight

Amniotic Fluid Embolus

- pretty rare, but mortality rate is very high (61-81%)
- mom gets amniotic fluid from baby that has crossed over into maternal circulation
- Causes circulatory collapse and system-wide problems that go into DIC
- Occurrence = 1:20,000 to 1:30,000 live births
- Moms usually end up going to ICU, will probably be on vent
- Teach mom to tell you if she has any difficulty breathing...this is serious!

Hydramnios (fluid > 2000 ml)

- May be related to congenital abnormalities
- Diabetes mom if BS is out of control; baby pees a lot b/c there is too much glucose
- Twins can have this also
- Can be chronic or acute (20-24 weeks)
- Mom may have difficulty breathing d/t big uterus; may remove some of the fluid
- Big issue in labor is that baby is floating around a lot and don't engage real well. If baby doesn't engage, then can have cord prolapse when BOW ruptures.

Oligohydramnios (fluid < 500 ml)

- Cause unknown
- Seen in post-maturity and IUGR (IUGR is usually r/t malformation in placenta, can be r/t PIH and placenta not getting good blood flow, so smoking can cause this also; two types of IUGR...assymetrical and symmetrical. Symmetrical means baby is small but proportionate (< 10% in growth); with assymetrical, the head is bigger than the abdomen and femur length...baby looks really skinny like a little old man; with IUGR the blood is spared for the most important organs (brain, heart, adrenal glands)...so abdomen is not going to get bigger but head is! Kidneys aren't getting enough blood so the kidneys aren't making enough urine which leads to oligohydramnios.
- If mom is post-date: will be induced
 - Mom will have variables (decelerations) b/c she doesn't have a lot of extra fluids so the vein is compressed.
 - May get amnioinfusion to get some of the pressure off the cord
- If mom is 28 weeks, she will be monitored via antepartum testing (fluid tested weekly or biweekly), NST, maybe biophysical profile.

Analgesic Agents

- Administration- based on
 - woman's request
 - established labor pattern
 - baseline assessment of mom & baby
 - progress of labor
- Types
 - Sedatives: barbituates (Seconal, Ambien); benzos (valium, versed) flumazenil is benzo reversal agent; H-1 Receptor antagonists (Phenergan, Vistaril, Benadryl); Narcotics (Stadol, Nubain, Demerol); Narcan is reversal for opioids

- Narcotic (Stadol, Nubain, Demoral...IV administration preferred, may precipitate drug withdrawal)
- H1-Receptor agonists: Phenergen, Vistaril, Benadryl
- Nursing Management
 - Determine Stage of Labor
 - Evaluate contraction frequency, duration, & intensity,
 - Established fetal well being
 - Desired effect & side effects
 - Safe form of transportation
 - Red Flags – Multipara greater than 8 cm, Advanced dilation primipara

Regional Anesthesia

- Temporary and reversible loss of sensation
- Types
 - Lumbar epidural – Uterus, Cervix, Vagina, & Perineum
 - Pudendal – Perineum & lower Vagina- Given in Second Stage, just before birth
 - Local infiltration –Perineum Given just before birth
 - Spinal – Uterus, Cervix, Vagina, & Perineum
- Risk- less than general anesthesia – produced by injecting anesthetic into specific area-agent direct contact with nervous tissue

Lumbar Epidural

- Administration
 - Injection of local anesthetic agent into epidural space
- Continuous block
 - Block continuous – usually administered during active labor, 85% achieve complete relief, 15% partial, & 3% no relief
- Advantages & Disadvantages
 - Advantages: Adequate pain relief, Woman fully awake during labor and birth process, Allows for internal rotation, Adjusted to allow for laboring down
 - Disadvantages: Hypotension, Severe Complications -Postdural puncture, seizure, meningitis, cardio-respiratory arrest, vertigo
 - Problems- Major problem Hypotension, Inadequate block-One sided block, Pruritus, Break through pain, Maternal temperature
 - Headaches, migraine headaches, neckaches, & tingling of the hands and fingers (Cunningham et al., 2005), Systemic toxic reaction
 - Redflags- drop in maternal blood pressure, fetal deceleration, respiratory depression, post delivery headache-worse with ambulation
- Contraindications
 - Local or systemic infection
 - Coagulation disorder or low PLT count
 - Anticipated maternal hemorrhage
 - Abruption placentae, Placenta previa
 - Allergy to a specific class of local anesthetics
 - Women with heart failure or aortic stenosis

Spinal Block

- Local anesthetic into spinal fluid (subarachnoid space)
 - Injected directly into the spinal fluid
 - Failure rate is low
 - Allows the drug to immediately mix with cerebrospinal fluid
 - Eliminates window (whatever that means). Usually used for operative delivery (C/S)
- Advantages & Disadvantages
 - Advantages: immediate onset, smaller drug volume, relative ease of administration
 - Disadvantages: intense blockade of sympathetic fibers, greater potential for fetal hypoxia, uterine tone is maintained, short acting so difficult to maintain

- Complications
 - Hypotension (prehydrate 500-2000 ml)
 - Ephedrine drug reaction- total spinal neurological sequelae (not sure what this means)
 - Anesthesia occurs at C3-C5 level
 - Respiratory function impaired
 - Spinal headache in 1-3%
 - Lasts up to 7 days
 - Blood patch performed, helps spinal headache

Pudendal Block

- Perineal anesthesia for second stage labor, birth & episiotomy repair; injected below pudendal plexus
- Advantages & Disadvantages
 - Adv: ease of administration, absence of hypoT, allows use of vacuum or low forceps delivery
 - Dis: urge to bear down may be decreased; burning sensation when block administered

Local Infiltration

- Intracutaneous, subcutaneous, & intramuscular
 - Injected into the perineum
- Advantages & Disadvantages
 - Adv: least amount of anesthetic agent used; done just prior to birth
 - Dis: large amounts of solution used; burning sensation at time of injection

General Anesthesia

- Methods Used
 - IV Injection
 - Pentothal –short acting Narcosis 30 seconds after IV administration
 - Ketamine – intermediate acting, contraindicated with preeclampsia or chronic hypertension
 - Inhalation of anesthetic agent
 - Nitrous oxide -Fetal uptake in 20 minutes; Isoflurane, halothane, sevoflurane, desflurane, enflurane – (may be in combination with Nitrous), May be used in combination with spinal or epidural anesthesia
 - Combination of both of the above
- Administration considerations
 - Preterm: susceptible to depressant drugs; poorly developed BBB; medication will attain higher concentration in CNS; decreased ability to metabolize and excrete drug after birth; use smallest dose possible
 - Preeclampsia: regional anesthesia preferred
 - Diabetes: reduction in placental blood flow, hypoT likely, CV depression during block, higher sympathetic blockade
 - Cardiac disease
 - Mild Stenosis: preferred method is continuous epidural and low forceps delivery, no valsava maneuvers;
 - Hypotension, controlled IV fluids, epidural or general anesthesia for C/S; avoid ketamine b/c it causes tachycardia
 - Bleeding:
 - If there is no active bleeding, FHR is good, and mom;s CV status is stable, then epidural is OK
 - if there is active bleeding, then treat hypovolemia; regional block is contraindicated in active bleeding, general anesthesia-Pentothal (a cardiac depressant and vasodilator) and Ketamine are recommended.
- Complications
 - General anesthesia has risk of aggravating maternal HTN
 - Intubation may be difficult, may cause mucosal edema in oral cavity and glottis
 - Fetal depression...anesthetic agent reaches fetus in about 2 minutes
 - Uterine relaxation, uterine atony
 - Decreased gastric motility (undigested food makes for production of more gastric juices which can be aspirated (Mendelson's syndrome/chemical pneumonitis). This is a leading cause of maternal death and it is due to the failure to establish a patent airway
 - Red flags for intubation is obesity!

Dysfunctional Labor Patterns (slide 12)

- Abnormal labor pattern
- MOST COMMON INDICATION FOR C/S
- It is termed 'dystocia"...an abnormal labor pattern resulting in prolonged labor
- The abnormality occurs with one of these three Ps (or maybe all): Power (contractions), Passenger (fetus) or Passageway (soft tissue or pelvis)
- **Hypertonic Labor Patterns**
 - Ineffective uterine contractions in the latent phase, resting tone is increased
 - Contractions are painful but ineffective. There is no cervical dilation or effacement
 - Contractions more frequent
 - Clinical Therapy = bedrest, sedation, oxytocin or amniotomy, rule out CPD or malpresentation.
- **Hypotonic Labor Patterns**
 - Cause -Unknown
 - Genetic factors which control normal physiologic process of labor
 - C-section and operative deliveries run in families
 - Advanced maternal age
 - Definition = uterine contractions irregular, low amplitude, less than 1 cm dilation per hour (protracted labor) OR no change of cervical dilation for 2 hours (arrest of progress)
 - Clinical Management
 - Oxytocin or AROM
 - Nursing Care
 - Assess VS, contractions, FHR
 - Vag exam to determine dilation, descent, check for caput (it increases as hypotonic labor goes on)
 - Assess mom for stress and anxiety
 - Red flags
 - PROM
 - Maternal temp
 - Increased incidence of chorioamnionitis

Precipitous Labor and Birth

- Rapid birth process: occurs within 3 hours
- Cause: low resistance in maternal soft tissues, rapid dilation, rapid descent, strong contractions
- Maternal Risks: Abruptio placenta, extensive laceration of cervix, vag and perineum
- Fetal Risks: Meconium, low apgar, brachial palsy, intracranial trauma

Postterm Pregnancy

- Definition = pregnancy that extends more than 294 days or 42 full weeks (from last menstrual period)
- Incidence = 7% of all pregnancies
- Cause = unknown; possibly error in dating; associated with previous postterm pregnancy, primiparity, placenta sulfatase deficient, fetal ancephaly, male fetus, genetic predisposition
- Maternal Risks = labor induction, macrosomic or LGA baby, increased use of vacuum or forceps, maternal hemorrhage, increased risk of C/S; mom has anxiety, fatigue, irritability
- Fetal Risk = Decreased uterine-placental circulation; decreased blood supply, oxygen and nutrition; mortality rate goes up; potential for dysmaturity syndrome is 20%; increased risk of oligohydramnios and umbilical cord compression
- Clinical Management = Nonstress test biweekly; amniotic fluid index weekly; possible biophysical profile

Fetal Malposition

- Persistent Posterior Occiput
 - Most common fetal malposition
 - 15% in early labor...as labor progresses, it may cease or the fetus is born in the OP position 5% of the time
- Maternal symptoms: intense back pain in the small of the back throughout labor
- Maternal/Fetal Risks

- third or fourth degree laceration
- higher incidence of operative delivery
- if failure to rotate, then fetal mortality
- Clinical Management
 - close monitoring of fetus
 - safest method of delivery is spontaneous birth with manual rotation
 - forceps assisted delivery with rotation is “Scanzoni maneuver”

Fetal Malpresentations

- Brow (the least common)
 - Cause: high parity, placenta previa, uterine anomaly, hydramnios, fetal anomaly, low birthweight, large fetus
 - Mechanics: forehead of fetus is the presenting part; the head is slightly extended and the fetal head enters the birth canal with its widest diameter...OUCH!
 - Maternal Risk: prolonged labor or arrested labor; C/S
 - Fetal Risk: birth injury, cerebral and neck compression, damage to trachea and larynx.
- Face
 - Occurrence: multiparous women, women with a pendulous abdomen (Yellow Dot!)
 - Contributing factors: contracted pelvis 10-40% (I have no idea what the percentages mean); ancephaly 30%, fetal malformations 60%
 - Mechanics: face of fetus is presenting part and head is hyperextended
 - Success rate for vaginal delivery
 - 60-70%
 - no attempt to manually rotate
 - mentum posterior can become wedged on anterior surface of sacrum
 - can place FSE on mentum (fetal scalp electrode can go on the chin)
- Breech
 - Incidence: 4% overall; for gestational age of 25-26 weeks it's 25%; for gestational age of 32 weeks it's 7%
 - Associated with...
 - Placenta previa
 - implantation of placenta in cornual area
 - hydramnios
 - high parity
 - oligohydramnios
 - hydrocephaly
 - anencephaly
 - previous breech presentation
 - uterine anomalies
 - pelvic tumors
 - multiple gestations
 - fetal anomalies
 - Types of Breech Presentation
 - Frank Breech (50-70%) most common; flexed and extended hips
 - Footling Breech (10-30%) one or both hips extended, foot is presenting part, occurs more frequently with preterm labor
 - Complete Breech (5-10%) sacrum is presenting part
 - Complications: cord prolapse, head entrapment (oh boy!)
 - Medical Management:
 - External version: attempted at 37-38 weeks
 - Planned C/S
 - Alternative therapies = mugwort (Chinese)
- Shoulder
 - Definition: Infant's long axis lies across abdomen
 - Associated with...

- grandmultiparity
- lax uterine muscles
- obstructions of bony pelvis
- placenta previa
- neoplasms
- fetal anomalies
- hydramnios
- preterm fetus
- Incidence: 1 in 300; not uncommon in multiple gestations
- Clinical Management: external version if baby is 28 weeks or greater
- Complications: cord prolapse, uterine rupture

Fetal Macrosomia

- Definition: fetal weight greater than 4500 grams
- Incidence: women who are obese are more likely to have macrosomic baby
- Complication: shoulder dystocia, adequate pelvis for normal birth but not for biig baby, possible brachial plexus injury
- Clinical Management:
 - McRobert's maneuver (lie on back with knees at chest)
 - Ultrasound for fetal weight, early induction

Multiple Gestations

- Incidence
 - Twins account for 3.2% of all pregnancies
 - Triplets account for 1.8% of all pregnancies
- Terminology
 - Dizygotic -Two separate ova (Fateral twins) 67%, Monozygotic Single ovum (Identical twin) 33%
 - Dichorionic-diamniotic twin (Single ovum) – division occurs within 72 hours after fertilization 30% of monozygotic twins
 - Monochorionic-diamniotic – division occurs at blastocyst stage 4 to 8 days after fertilization 68% of monozygotic twins
 - Monochorionic-monoamniotic – division occurs in primitive germ disk 9 to 13 days past fertilization 2% of monozygotic twins
- Maternal Complications
 - spontaneous abortion, gestational diabetes, HTN, pulmonary edema, maternal anemia, hydramnios, PROM, incompetent cervix, IUGR, preterm birth
 - uterine dysfunction, uterine atony or hemorrhage
- Clinical Management
 - Decision is made based on presence of complications and presentation of fetus
 - If no complications and both are vertex, then vag birth
 - Placenta is examined after and sent to pathology to determine if mono or dizygotic twins

Placenta Problems

- Types
 - Developmental: placenta lesions, succenturiate placenta, circumvaliate placenta, battledore placenta
 - Degenerative: infarct and placental calcifications
- Placental Problems (Developmental)
 - Succenturiate Placenta
 - One or more accessory lobes is attached to the main placenta by fetal vessels
 - Complications: PP hemorrhage; no complications for baby
 - Circumvallate Placenta
 - Fetal surface of placenta exposed through an opening around the umbilical cord; vessel descends from cord and ends at margin (I have absolutely NO IDEA what this means)
 - Maternal Complications are linked to threatened abortion: PTL, painless bleeding after 20 weeks, placental insufficiency, intrapartum hemorrhage

- Fetal Complications: IUGR, prematurity, death
- Developmental Problems of the Placenta
 - Definition: insertion of the cord within 1.5 cm of the margin
 - Incidence: 5-7% of all pregnancies
 - Maternal Complications: PTL, bleeding in labor, vessel rupture
 - Fetal Complications: prematurity and fetal distress
- Degenerative Changes of Placenta
 - Definition: excessive calcifications or infarcts
 - Affects uterine/placental fetal exchange
 - Causes: HTN (PIH or chronic), smoking
 - Grade 0: lasts 1st trimester through early 2nd trimester only; uniform moderate ethnogenicity; smooth chorionic plate without indentations
 - Grade 1: mid 2nd trimester through early 3rd trimester (18-29 weeks), subtle indentations of chorionic plate, small and diffuse calcifications (hyperechoic) that are randomly dispersed in the placenta
 - Grade 2: late 3rd trimester (around 30 weeks through delivery); larger indentations along the chorionic plate; larger calcifications in a dot-dash configuration along the basilar plate
 - Grade 3: 39 weeks to post dates; complete indentations of chorionic plate through to the basilar plate creating "cotyledons"...these are portions of the placenta separated by the indentations; there are more irregular calcifications with significant shadowing; may signify placental dysmaturity which can cause IUGR; associated with smoking, chronic HTN, SLE and diabetes

Umbilical Cord Abnormalities

- Types
 - Umbilical vein: true knot, hypercoiled cord, short cord, long cord
 - Insertion variations: velamentous insertion, vasa previa
- Velamentous Insertion
 - Incidence: 1-2% of all placentas
 - Definition: cord insertion into membranes; vessels run between amnion and chorion
 - Maternal complication: hemorrhage if one of the vessels is torn
 - Fetal complications: fetal stress, hemorrhage

Amniotic Fluid Embolism

- Definition: bolus of amniotic fluid enters maternal circulation and lungs causing a massive immune response to occur
- Cause: unknown
- Mortality rate: 61-86% of women die; 50-61% of fetuses die; it is the SECOND LEADING CAUSE of maternal death
- Signs of symptoms: respiratory distress, restlessness, dyspnea, cyanosis, pulmonary edema, respiratory arrest
- Signs of circulatory collapse: tachyC, hypoT, shock, cardiac arrest
- Nursing response: optimize perfusion and oxygenation, maximize cardiac output and BP, deliver a live fetus!

Hydramnios

- Definition: greater than 2000 ml of fluid (aka "polyhydramnios")
- Cause: unknown; occurs in major congenital anomalies, gestational diabetes, anencephaly, twins
- Types
 - Chronic: fluid builds gradually
 - Acute: fluid builds suddenly between 20-24 weeks
- Clinical Management: needle amniotomy to decrease symptoms of maternal dyspnea and pain
- Red flag: watch for prolapsed cord in labor!

Oligohydramnios

- Definition: less than 500 ml amniotic fluid
- Cause: unknown, found in postmaturity and IUGR
- Clinical Management: biophysical profile, NST, serial ultrasounds

- Considerations in labor: amnioinfusion

Cephalopelvic Disproportion (CPD)

- Definition: a contracture in any of the following:
 - maternal bony pelvis (beginning at inlet where the ischial tuberosity has a diameter of < 8cm, and ending at outlet)
 - maternal soft tissues
- Medical Management:
 - trial of labor...mom labors down and the forces of labor push the biparietal diameter of the fetal head beyond the interspinous obstruction
 - If mom has an infection, then labor is prolonged....or she meant that prolonged labor leads to infection.
- Treatment: C/S for no progress
- Red Flags
 - unengaged head in early labor with primigravida
 - hypotonic uterine contractions
 - deflexion of fetal head
 - uncontrolled pushing before complete dilation
 - failure to descend
 - edema of anterior portion of cervix

Birth Related Procedures

- Version
 - Definition – turning the fetus to change the presentation by abdominal or intrauterine manipulation, in which the fetus is changed from a breech, transverse, or oblique lie to a cephalic presentation by external manipulation
 - Success rate – 60%
 - Types
 - external cephalic version – may be attempted after 36 to 37 weeks applying pressure to the fetal head and buttocks so that the fetus completes a backward flip or forward roll
 - Podalic version – used in second twin deliveries during a vaginal birth; obstetrician places hands inside of uterus, grabs the fetus feet and then turns the fetus from transverse or non cephalic presentation to a breech presentation
 - Criteria – single fetus, fetal breech not engaged, adequate amniotic fluid, reactive nonstress test, fetus must be at 36 to 37 weeks,
 - Contraindications
 - suspected IUGR, fetal anomalies, presence of abnormal FHR, rupture membranes, cesarean birth indicated anyway, maternal problems –gestational diabetes (requiring insulin), uncontrolled hypertension, preeclampsia, maternal cardiac disease
 - Amniotic fluid abnormalities – oligo or poly, previous lower uterine segment c-section, nuchal cord, multiple gestation, third trimester bleeding, uterine malformation

Induction of Labor

- Types
 - Stripping Membranes –sweeping motion separate amniotic membranes from lower uterine segment and internal os – thought to release prostaglandins
 - Oxytocin Infusion – High dose vs low dose
 - Cervical Ripening Agents – cytotec, cervidil, prepdil
 - Mechanical – Balloon catheter, laminaria
 - Complementary – intercourse, nipple stimulation, Herbs, castor oil, accupressure
- Indication for Induction -Diabetes Mellitus, renal disease, preeclampsia, hypertensive disorders, PROM, Chorioamnionitis, fetal demise, postterm gestation, IUGR, Isoimmunization, history of rapid delivery, mild abruption placenta, nonreassuring antepartal testing, severe oligohydramnios
- Contraindications -Abnormal fetal heart rate pattern, breech presentation, unknown fetal presentation, multiple gestation, polyhydramnios, presenting part above maternal pelvic inlet, severe hypertension, maternal heart

- disease, complete placenta previa, vasa previa, abruptio placentae, prolapsed cord, previous myomectomy, vaginal bleeding unknown cause, transverse lie, more than 1 previous c-section, cpd, active genital herpes
- Prelabor Status Evaluation- Bishop score
 - 5 criteria; cervical dilation, cervical effacement, fetal station, cervical consistency, cervical position

Amniotomy

- Definition: artificial rupture of membranes (AROM); uses a hook inserted through the cervix to break the bag of water
- Advantages:
 - contractions elicited are similar to spontaneous labor
 - usually there is no risk of hypertonus or ruptured uterus
 - does not require intensive monitoring
 - EFM facilitated due to ability to place the fetal scalp electrode
 - color and composition of amniotic fluid can be evaluated
- Disadvantages
 - Increased incidence of infection, cord prolapse compression and molding of fetal head
 - variable decels
 - fetal injury
 - bleeding if undiagnosed vasa previa is present
- Red flags: amniotomy with undescended fetal head can lead to cord prolapse

Amnioinfusion

- Introduction of warmed normal saline into amniotic cavity through an IUPC
- Indications
 - oligohydramnios
 - fetal cord compression
 - severe variable decels or prolonged decels
 - meconium stained fluid
- Contraindications
 - Amnionitis
 - hydramnios
 - uterine hypertonus
 - multiple gestation
 - known fetal anomaly
 - uterine anomaly
 - nonreassuring fetal status requiring birth
 - nonvertex presentation
- Procedure: inflation of fluid bolus from 250-500 ml over 20-30 mins followed by a continuous infusion; monitor I&O
- Red flags: increasing uterine size without output or bleeding

Episiotomy

- Definition- surgical incision of the perineal body
- Types
 - Midline – performed along the median raphe of the perineum – extends down from the vaginal orifice to the fibers of the rectal sphincter
 - Disadvantage- tear will extend through anal sphincter and rectum
 - Mediolateral – begins in the midline of the posterior couchette and extends at a 45-degree angle downward to the right or left
 - Disadvantage- greater blood loss, longer healing period, postpartal discomfort, repair more difficult
 - Predisposition – large or macrosomic fetus, occiput-posterior, use of forceps or vacuum extractor, shoulder dystocia, and white race- other factors use of lithotomy position (excessive perineal stretching, encouraging or requiring sustained breath holding during second-stage pushing, time limits

- Considerations -No maternal advantage, does not protect perineum, perineal lacerations heal quicker, greater likely hood of extension
- Questions as to whether should be performed in LGA births
- Complications -Blood loss, infection, perineal discomfort, dyspareunia, flatal incontinence

Forcep-Assisted Delivery

- Definition: instrument delivery with two curved spoon-like blades; these assist in delivery of the fetal head using traction applied with contractions
- Indications:
 - Fetal distress during labor
 - Abnormal presentation
 - Breech delivery – instrument delivery of head
 - Arrest of rotation
 - Any condition that threatens the mother or fetus that can be relieved by birth
- Prerequisites -Empty bladder, fully dilated, fetal head engaged, adequate anesthesia

Vacuum Extraction

- INVOLVES THE USE OF A CUPLIKE SUCTION DEVICE THAT IS ATTACHED TO THE FETAL HEAD. TRACTION IS APPLIED DURING CONTRACTIONS TO ASSIST IN THE DESCENT AND BIRTH OF THE HEAD, AFTER WHICH, THE VACUUM CUP IS RELEASED AND REMOVED PRECEDING DELIVERY OF THE FETAL BODY.
- Accounts for 68% of all operative births
- Pump creates negative pressure -50 to 60 mmHg depends on hospital protocol
- Indications
 - Maternal exhaustion
 - fetal distress during second stage labor
 - prolonged second state or nonreassuring heart rate pattern
- Conditions
 - Presenting part must be vertex at 0 station
 - only performed by experienced practitioner
 - terminated if device pops off after three attempts and delivery does not occur
- Risks: Cephalohematoma, scalp lacerations, subdural hematoma, maternal lacerations to cervix, vagina, or perineum

Cesarean Birth

- Indications: Complete placenta previa, CPD, placental abruption, active genital herpes, umbilical cord prolapse, failure to progress, nonreassuring fetal status, breech, anomalies, previous C/S, maternal preference.
- Incisions:
 - Skin=Transverse – suboptimal visualization, does not allow for extension, Vertical - quicker
 - Uterine =Depends on need for cesarean, Lower uterine segment, Upper segment of uterine corpus
- Preoperatively
 - Consents, shave, indwelling catheter, prepare site, provide emotional support
- Intraoperatively
 - Assist in positioning of patient, fetal heart rate, instrument counts
- Postoperatively
 - Monitoring vital signs, provide pain relief, dressing and perineal pad checks, assist mother and baby with bonding

Vaginal Birth After Cesarean (VBAC)

- Success rate:
 - highest for C/S performed for breech (91%)
 - nonreassuring FHR pattern (84% success rate)
 - previous dystocia before 5 cm (67%)
 - previous dystocia 6-9 cm (73%)

- second stage dystocia (75%)
- Guidelines by ACOG: one previous C/S birth with low transverse incision, adequate pelvis, no other uterine scar or previous rupture
- Complications:
 - uterine rupture and dehiscence
 - 0.1% to 0.7% risk of rupture
 - hysterectomy
 - uterine infection
 - maternal and neonatal death
 - higher rates of stillbirth and hypoxia infants
 - transfusion

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