

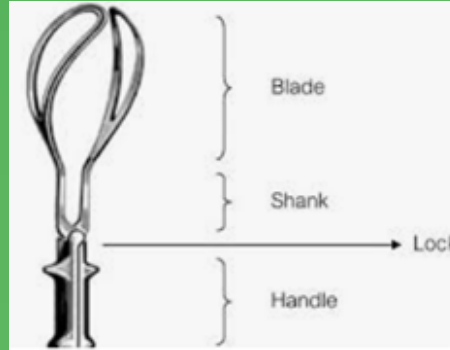


Operative Vaginal Delivery

Vacuum Extraction & Forceps Delivery



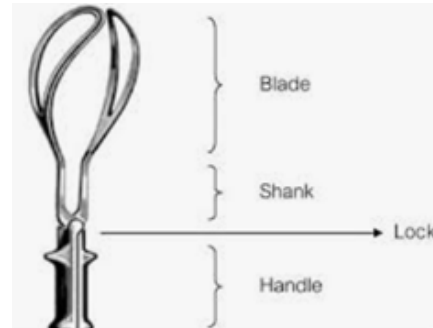
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Definition & Overview

- **Operative Vaginal Delivery (OVD):** Use of instruments to expedite vaginal delivery
- **Two Main Instruments:** Vacuum extraction (VE) and Forceps extraction (FE)
- Used when vaginal delivery cannot progress safely without assistance
- Requires full cervical dilation and fetal head engagement





Indications for OVD

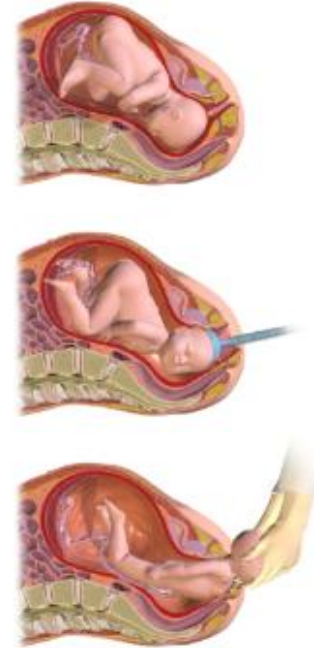
- **Fetal Indications:** Non-reassuring fetal heart rate tracing
- **Maternal Indications:** Exhaustion, inability to push effectively
- **Labor Progress:** Prolonged second stage of labor
- **Medical Conditions:** Cardiac disease, neurological disorders, pulmonary disease



Vacuum-assisted Delivery

Prerequisites for Safe OVD

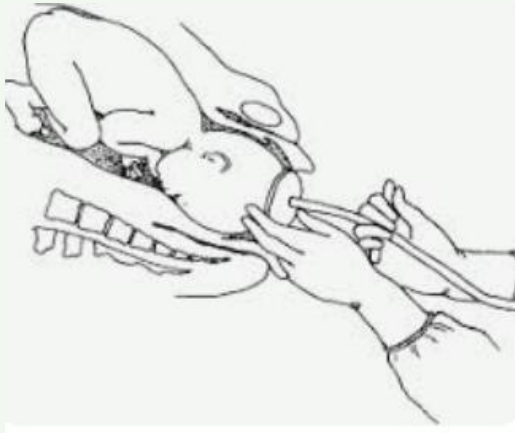
- Cervix fully dilated (10 cm)
- Fetal head engaged (station +2) or lower)
- Known fetal head position
- Ruptured membranes
- Empty maternal bladder
- Adequate maternal pelvis



Contraindications

Absolute Contraindications:

- Fetal bleeding disorders (hemophilia, thrombocytopenia)
- Fetal bone demineralization (osteogenesis imperfecta)
- Prematurity < 34 weeks (for vacuum only)
- Previous failed vacuum attempt





Vacuum Extraction: Advantages

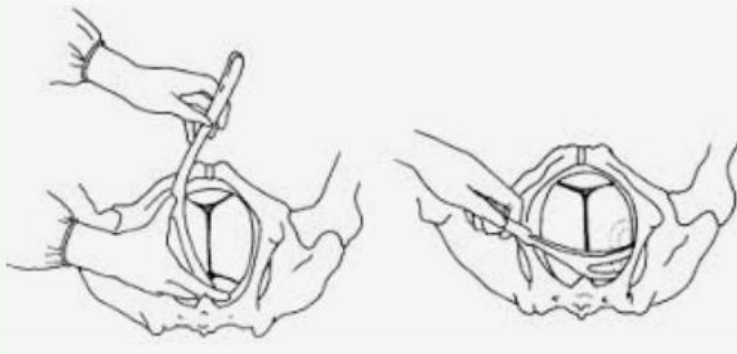
- Easy to learn and apply
- Quick delivery
- Less maternal genital trauma
- Less maternal discomfort
- Requires less anesthesia





Forceps Extraction: Advantages

- Higher success rate for vaginal delivery
- Less neonatal cephalohematoma and hemorrhage
- Allows rotation of fetal head
- Can be used in preterm fetuses
- Less scalp bleeding





Preparation BEFORE OVD

- Assess and verify all prerequisites met
- Obtain informed consent
- Empty maternal bladder (catheterize if needed)
- Prepare instruments and equipment
- Ensure anesthesia available



Nursing Care DURING OVD

- Monitor maternal vital signs continuously
- Monitor fetal heart rate before and after delivery
- Coordinate with obstetric team
- Assist with instrument application
- Document procedure details and time



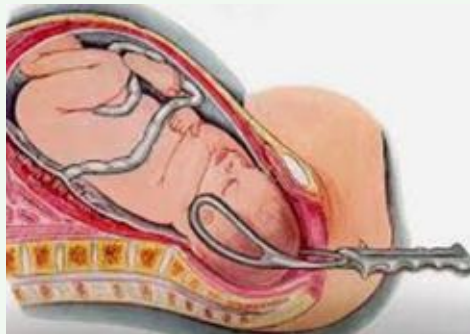
Postpartum Care: Mother

- Assess perineal trauma and repair if needed
- Monitor for hemorrhage and infection
- Pain management and comfort measures
- Assess bowel/bladder function
- Educate on wound care and activity restrictions



Postpartum Care: Neonate

- Perform Apgar scoring immediately
- Assess for birth injuries (caput, bruising)
- Monitor vital signs and temperature
- Observe for signs of intracranial hemorrhage
- Monitor feeding and jaundice development



Maternal Complications (Part 1)

- **Perineal Trauma:** 3rd/4th degree lacerations (more with forceps)
- **Genital Injuries:** Vaginal/cervical tears, anal sphincter damage
- **Hemorrhage:** Excess blood loss requiring transfusion
- **Infection:** Perineal wound infections



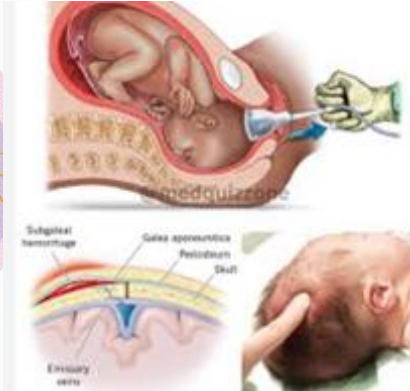
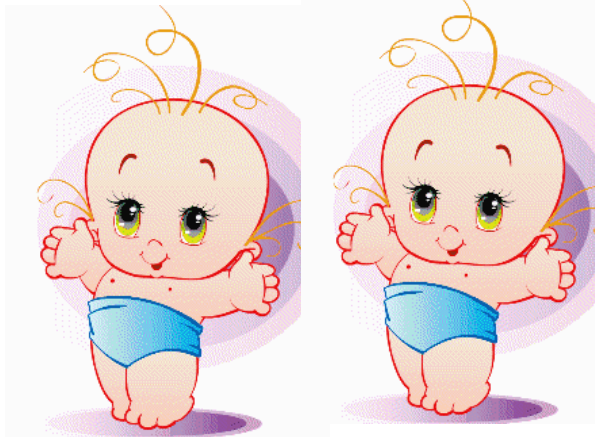
Maternal Complications (Part 2)

- **Urinary/Bowel Issues:** Anal incontinence, fecal incontinence
- **Pain:** Chronic pelvic pain, dyspareunia
- **Psychosocial:** Anxiety, depression related to trauma
- **Anesthesia Complications:** Epidural-related side effects



Neonatal Complications: Vacuum

- **Cephalohematoma:** Blood collection under scalp periosteum
- **Caput Succedaneum:** Scalp edema and bruising from chignon
(Artificial caput succedaneum)
- **Retinal Hemorrhage:** Bleeding in eye vessels
- **Jaundice:** From hemorrhage (more common)





Neonatal Complications: Forceps

- **Facial Trauma:** Bruising, lacerations from forceps blades
- **Nerve Injuries:** Facial nerve paralysis (temporary)
- **Intracranial Injury:** Lower risk than vacuum
- **Skull Fractures:** Rare but possible with improper application





Safety Limits & Recommendations

- Maximum 3 sets of pulls before reassessing
- No more than 2-3 cup detachments (vacuum)
- Total vacuum application time: 20-30 minutes maximum
- If no descent → discontinue and proceed to cesarean
- Never combine vacuum then forceps (high complication risk)





Nursing Diagnoses (Part 1)

- **Risk for Ineffective Maternal/Fetal Tissue Perfusion** r/t operative delivery procedure
- **Risk for Infection** r/t genital tract trauma
- **Acute Pain** r/t perineal trauma and laceration repair



Nursing Diagnoses (Part 2)

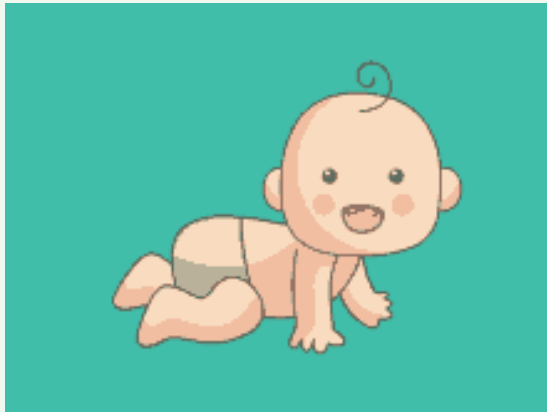
- **Risk for Hemorrhage** r/t operative trauma to genital tract
- **Anxiety** r/t labor complications and operative delivery
- **Knowledge Deficit** r/t postpartum care and activity restrictions





Nursing Diagnoses (Part 3)

- **Risk for Altered Bowel Elimination** r/t sphincter injury from operative delivery
- **Impaired Urinary Elimination** r/t catheterization and perineal trauma
- **Risk for Impaired Skin Integrity** r/t perineal lacerations and repair





Nursing Diagnoses: Neonatal

- **Risk for Ineffective Cerebral Tissue Perfusion** r/t birth trauma
- **Risk for Hyperbilirubinemia** r/t cephalohematoma from extraction
- **Risk for Infection** r/t breaks in skin from instruments
- **Risk for Ineffective Thermoregulation** r/t birth stress





Key Interventions: Mother

- Frequent perineal assessment for bleeding/infection
- Pain management with analgesics and comfort measures
- Monitor vital signs and lochia for hemorrhage
- Teach perineal care and wound hygiene
- Support breastfeeding initiation





Key Interventions: Neonate

- Frequent vital signs and neurological assessments
- Monitor for feeding difficulties related to facial trauma
- Monitor bilirubin levels if cephalohematoma present
- Assess progress in resolution of birth injuries
- Provide parent education on normal vs abnormal findings





Clinical Outcomes & Prognosis

- Most neonatal injuries resolve within weeks to months
- Maternal perineal healing typically 4-6 weeks
- Long-term anal incontinence risk < 5% with proper technique
- Maternal satisfaction depends on communication and support
- Early intervention prevents complications



Vacuum vs Forceps Comparison



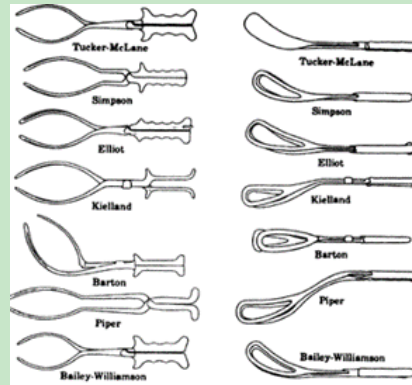
Vacuum Extraction

- Less maternal trauma
- Easier to learn
- More neonatal caput/jaundice
- Cannot rotate head



Forceps Extraction

- Better success rate
- Can rotate head
- More maternal perineal trauma
- Requires training





Summary & Key Takeaways

- OVD is safe when prerequisites are met and proper technique used
- Both VE and FE have distinct advantages and complications
- Comprehensive nursing care before, during, and after is essential
- Monitor for maternal and neonatal complications
- Supportive care and education improve outcomes





Thank You!

Questions?