Chapter 6

Nursing Care of Mother and Infant During Labor and Birth

Key Terms

- Acrocyanosis
- Amnioinfusion
- Amniotomy
- Crowning
- Dilate
- Doula
- Efface
- Fetal bradycardia
- Fetal tachycardia
- Fontanelle
- Molding
- Nucal cord
- Station
- Sutures

Cultural Influences on Birth Practices

- Role of woman in labor and delivery
  - Cultural preferences require flexibility
- Role of father/partner in labor and delivery
  - May be driven by cultural practices

Settings for Childbirth

- Hospitals
  - Advantages
  - Disadvantages
- Freestanding birth centers
  - Advantages
  - Disadvantages
- Home
Advantages
Disadvantages

Components of the Birth Process

The Four “Ps”

Powers
Passage
Passenger
Psyche

Factors that Influence the Progress of Labor

Preparation
Position
Professional
Place
Procedures
People

Uterine Contractions

Effect of contractions on the cervix

Efface
Dilate

Phase of contractions
- Increment
- Peak
- Decrement

- Frequency
- Duration
- Intensity
  - Mild
  - Moderate
  - Firm
- Maternal pushing
- Cervical Effacement and Dilation
- Contraction Cycle
- Nursing Tip
  - Provide emotional support to the laboring woman so she is less anxious and fearful
  - Excessive anxiety or fear can cause greater pain, inhibit the progress of labor, and reduce blood flow to the placenta and fetus
- The Passage
- Bony pelvis
  - True
    - Directly involved in childbirth
      - Inlet
      - Midpelvis
Outlet

False

- Flares
- Upper portion of pelvis

Soft tissues

- If previous delivery, will yield more readily to contractions and pushing efforts
- May not yield as readily in primiparas or older women

The Passenger—Fetal Skull

The Passenger—Fetal Lie

The Passenger—Presentation

Classifications of Fetal Presentations and Positions

Psyche

- Mental state can influence the course of labor
- The woman’s cultural and individual values influence how she will cope with childbirth

Normal Childbirth

Signs of Impending Labor

- Braxton Hicks contractions
- Increased vaginal discharge
- Bloody show
- Rupture of the membranes
- Energy spurt
- Weight loss
• Mechanisms of Labor
• Descent
  - Station
• Engagement
• Flexion
• Internal rotation
• Extension
• External rotation
• Expulsion
• Birth Station
• Mechanisms of Labor
• Admission to the Hospital or Birth Center
• When to Go to the Hospital or Birth Center
• Contractions
• Ruptured membranes
• Bleeding other than bloody show
• Decreased fetal movement
• Any other concern
• Admission Data Collection
• Three major assessments performed promptly on admission
Fetal condition

Maternal condition

Impending birth

• Admission Procedures
• Permits/consents
• Laboratory tests
• Intravenous infusion
• Perineal prep
• Determining fetal position and presentation
• Comparison of False and True Labor

• False labor
  — Contractions irregular
  — Walking relieves contractions
  — Bloody show usually not present
  — No change in effacement/dilation of cervix

• True labor
  — Contractions gradually develop a regular pattern
  — Contractions become stronger and more effective with walking
  — Discomfort in lower back/abdomen
  — Bloody show often present
  — Progressive effacement and dilation of cervix

• Nursing Care Before Birth

  After admission to the labor unit, nursing care consists of
Monitoring the fetus

Monitoring the laboring woman

Helping the woman cope with labor

- Monitoring the Fetus
- Fetal heart rate
- Intermittent auscultation
- Continuous electronic fetal monitoring
- Evaluating Fetal Heart Rate Patterns
- Baseline FHR
  - 110-160 BPM
- Fetal bradycardia
  - <110 BPM
- Fetal tachycardia
  - >160 BPM
- Baseline variability
- Moderate variability
- Marked variability
- Absent variability

- Accelerations
  - Early decelerations
  - Variable decelerations
  - Late decelerations
  - Prolonged decelerations
  - Recurrent decelerations
  - Intermittent decelerations
Sinusoidal pattern

Reassuring and Nonreassuring FHR and Uterine Activity Patterns

Reassuring patterns
- Stable fetal heart rate (FHR)
- Moderate variability
- Accelerations
- Uterine contraction frequency greater than every 2 minutes; duration less than 90 seconds; relaxation interval of at least 60 seconds

Nonreassuring patterns
- Tachycardia
- Bradycardia
- Decreased or absent variability; little fluctuation in rate
- Late decelerations
- Variable decelerations

Late Decelerations

Monitoring the Woman

Vital signs

Contractions

Progress of labor

Intake and output

Response to labor

Six Lamaze Institute Basic Practices for Maternity Care

Labor should begin on its own

Woman should have freedom of movement
• Woman should have a birth support person or doula
• No routine interventions should be performed
• Woman should be in non-supine positions
• Woman should not be separated from infant
• Helping the Woman Cope with Labor
  • Labor support
  • Teaching
  • Providing encouragement
  • Supporting/teaching the partner
    — Teach how labor pains affect the woman’s behavior/attitude
    — How to adapt responses to the woman’s behavior
    — What to expect in his/her own emotional responses
    — Effects of epidural analgesia
• Stages and Phases of Labor
  • First stage—dilation and effacement (can last 4 to 6 hours)
  • Second stage—expulsion of fetus (30 minutes to 2 hours)
  • Third stage—expulsion of placenta (5 to 30 minutes)
  • Fourth stage—recovery
• Vaginal Birth After Cesarean
  • Main concern
    • Uterine scar will rupture
    • Can disrupt placental blood flow
• Lead to hemorrhage
• Woman may need more support than other laboring women
• Nurse provides empathy and support
• Nursing Responsibilities During Birth
• Preparing the delivery instruments and infant equipment
• Perineal scrub
• Administering medications
• Providing initial care to the infant
• Assessing Apgar score
• Assessing infant for obvious abnormalities
• Examining the placenta
• Identifying mother and infant
• Promoting parent-infant bonding
• Immediate Postpartum Period: Third and Fourth Stages of Labor
  • Third stage—expulsion of placenta
    — Schulze or Duncan’s
  • Fourth stage—nursing care includes
    — Identifying and preventing hemorrhage
    — Evaluating and intervening for pain
    — Observing bladder function and urine output
    — Evaluating recovery from anesthesia
Providing initial care to the newborn infant

Promoting bonding and attachment between the infant and family

• Nursing Care Immediately After Birth

• Care of the mother

  • Observing for hemorrhage
    • Vital signs
    • Skin color
    • Location and firmness of uterine fundus
    • Lochia
    • Pain

  • Promoting comfort
    • Keep warm and dry
    • Ice to perineum to help reduce swelling and bruising

• Nursing Care Immediately After Birth (cont.)

• Care of the infant

  • Phase 1
    • From birth to 1 hour (usually in delivery room)

  • Phase 2
    • From 1 to 3 hours (usually in transition nursery or postpartum unit)

  • Phase 3
    • From 2 to 12 hours (usually in postpartum unit if rooming-in with the mother)

• Phase 1: Care of the Newborn

• Initial care includes
— Maintaining thermoregulation
— Maintaining cardiorespiratory function
— Observing for urination and/or passage of meconium
— Identifying the mother, father, and newborn
— Performing a brief assessment for major anomalies
— Encouraging bonding/breastfeeding

• Care of the Newborn
• Apgar Scoring
• Heart rate
• Respiratory effort
• Muscle tone
• Reflex response to suction or gentle stimulation on the soles of the feet
• Skin color
• Administering Medications to the Newborn
• Eye care
• Vitamin K (AquaMEPHYTON)
• Observe for Major Anomalies
• Head trauma from delivery
• Symmetry and equality of extremities
  — Are they of equal length?
  — Do they move with same vigor on both sides?
• Assess digits of hands and feet
  — Any evidence of webbing or abnormal number of digits

• Umbilical Cord Blood Banking

  • This type of blood is capable of regenerating stem cells that are able to replace diseased cells

  • Informed consent is essential

  • Collect blood after cord has been clamped

  • Blood must be transported within 48 hours of collection to blood banking facility