N432 Labor and Delivery Concept Map

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N432: Maternal-Newborn Care

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Medications

1. **Cefazolin Sodium**
   Dosage: 2g   **Route:** IV push
   Pharmacological classification: First-generation cephalosporin (Bartlett, 2023)
   Therapeutic classification: Antibiotic (Bartlett, 2023)
   Reason for taking: To prevent post-cesarean surgical site infections. (Bartlett, 2023)
   Assessment before administration: Obtain culture and sensitivity test, if possible, and order before giving the drug. (Bartlett, 2023)

2. **Lactated Ringer**
   Dosage: 125mL/hr.   **Route:** IV solution
   Pharmacological classification: Electrolyte cation (Bartlett, 2023)
   Therapeutic classification: Electrolyte replacement (Bartlett, 2023)
   Reason for taking: To replace water and electrolyte loss. (Bartlett, 2023)
   Assessment before administration: Assess the patient's blood pressure and review medical history for conditions that may predispose the patient to develop hyperkalemia. (Bartlett, 2023)

3. **Reglan**
   Dosage: 10 mg   **Route:** PO
   Pharmacological classification: Dopamine 2 receptor antagonist (Bartlett, 2023)
   Therapeutic classification: Antiemetic, Upper GI stimulant (Bartlett, 2023)
   Reason for taking: For nausea and vomiting. (Bartlett, 2023)
   Assessment before administration: Assess the patient for signs of intestinal obstruction, such as abnormal bowel sounds, diarrhea, nausea, and vomiting. (Bartlett, 2023)

4. **Morphine**
   Dosage: 0.2 mg   **Route:** spinal/ epidural injection
   Pharmacological classification: Opioid (Bartlett, 2023)
   Therapeutic classification: Opioid analgesic (Bartlett, 2023)
   Reason for taking: Treatment of moderate to severe pain. (Bartlett, 2023)
   Assessment before administration: Monitoring patient's pain level and respiratory rate before administration. (Bartlett, 2023)

5. **Sodium Citrate**
   Dosage: 30 mL once   **Route:** PO
   Pharmacological classification: urinary alkalinizes. (Bartlett, 2023)
   Therapeutic classification: urinary alkalinizes. (Bartlett, 2023)
   Reason for taking: to help neutralize gastric secretions. (Bartlett, 2023)
   Assessment before administering: *Assess patient for risk of aspiration before administering.* (Bartlett, 2023)

Demographic Data

Admitting diagnosis: Primary Cesarean Section

Secondary diagnosis: Monochorionic diamniotic twin pregnancy, History of fourth degree

Age of client: 28 years old

Weight in kgs: 83.5

Allergies: No known allergies

Date of admission: 9/7/ 2023

Support person present: Husband

Presentation to Labor and Delivery

Electronic Fetal Heart Monitoring: (At the beginning and the end of shift.)

Baseline EFH: (8:30 am)140 Baby A, 135 Baby B (12:15 pm) 140 Baby A, 135 Baby B

Variability: (8:30 am) Moderate for both babies, (12:15 pm) Moderate for both babies.

Accelerations: Present for both babies

Decelerations: (8:30 am) none for both babies, (12:15 pm) none for baby A, variables noted for baby B.

Contractions: None

   -frequency

   -length

   -strength

   -patient's response

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The patient was admitted to the labor and delivery unit on September 7th for a scheduled C-section. The patient is here to deliver monochorionic twins, which means the babies share a placenta and, therefore, a blood supply, which puts them at a higher risk for complications specific to a shared blood supply (Medicine, 2019). Due to the potential for complications during labor, these patients are monitored closely. The patient did not experience labor pains or report any aggravating factors. There were no complications during the surgery, and both babies were born healthy with no deformities. After delivery, the patient and her babies were monitored closely to ensure no postpartum complications.

Prenatal & Current Lab Values/Diagnostics

Stat CBC – Absolute Neutrophil (9.58), Normal value (1.70 - 7.00) (Pagana et al., 2019).

Absolute Lymphocyte (0.46), Normal value (1.00 – 4.80) (Pagana et al., 2019).

GBS – Negative

RPR – Nonreactive

HIV – Negative

Medical History

Prenatal History: The patient is 36 weeks, 6 days gestation. The client's GTPAL is 2-0-2-0-3. The client is in the hospital for a scheduled cesarean section.

Previous Medical History: N/A

Surgical History: The patient has a surgical history that includes a nasal rhinoplasty and wisdom tooth extraction.

Family History: N/A

Social History: The patient stated she " didn't smoke or drink alcohol during her pregnancy."

Active Orders

External fetal Monitoring – To help detect changes in the regular heart rate pattern during labor.

16 Fr Foley Catheter – To empty the bladder during labor.

Pneumatic compression – To prevent blood clots.

Vitals Q4 hours – To assess the patient's well-being. Vital signs provide crucial information about the organs in the body.

OB hemorrhage risk score – to identify patients at a higher risk for hemorrhage to support planning for optimal response.

Type and Screen – to identify the patient's need for Rh immune globulin and to identify maternal red blood cell antibodies.

Prep abdominal and mons pubis – to prepare for the cesarean.

Stages of Labor

Stage 1

The first stage of labor is cervical dilation. This stage can last up to 20 hours; however, this varies from patient to patient. This stage ends when the patient reaches 10 cm in diameter. This lets the doctors know that it is time for mom to push. The first stage of labor is divided into two phases. The first phase is called the latent phase. It begins with regular contractions and ends when rapid cervical dilation begins. During this phase, the patient will go from 0-6 cm in dilation, with contractions occurring every 5-10 minutes, lasting 30 to 45 seconds (Ricci et al., 2021). Effacement of the cervix is 0%-40%; during this phase, most patients remain in a good mood and describe their contractions as feeling like period cramps. Many patients remain at home during this phase. The second phase of the first stage of labor is the active phase. During the active phase, dilation occurs more rapidly until the patient reaches 10cm and complete effacement. This usually occurs at a rate of 1.2 to 1.5 cm per hour. Contractions become more frequent every 2 to 5 minutes and increase in duration to 45 to 60 seconds. The baby descends farther in the pelvis, and the mother's discomfort rises from moderate to strong as she focuses on breathing and relaxation techniques to help cope with the pain from the contractions. My patient did not experience this because she was admitted to labor and delivery for a scheduled cesarean section.

Stage 2

The second stage of labor starts when the cervix is completely dilated to 10 cm with 100% effacement and ends with the birth of the newborn. The baby moves through the birth canal and out of the body during this stage. Contractions now occur every 2 to 3 mins, lasting 60 to 90 seconds, and are more severe. Some factors can contribute to more prolonged labor, including pelvis shape, getting an epidural, and birthing a big baby. Being in the second stage of labor for long periods is associated with adverse outcomes like infection, postpartum hemorrhage, and third and fourth-degree perineal lacerations (Ricci et al., 2021). During the second stage, the patient is in active labor and has an overwhelming urge to push. The patient will feel rectal pressure, and the infant's head becomes apparent at the vaginal opening but disappears between contractions. The baby is crowned and ready to enter the world when the top of the head does not disappear between contractions. My patient did not experience this because she was admitted to labor and delivery for a scheduled cesarean section.

Stage 3

The third stage of labor starts with the birth of the baby and ends with the birth of the placenta. There are two phases of stage 3: the first is placental separation, and the second is placental expulsion. During placental separation, the uterus continues to contract, causing the placenta to pull away from the uterine wall (Ricci et al., 2021). Some common signs of placental separation include the uterus rising upward, the umbilical cord lengthens, a sudden release of blood from the vagina, and the uterus changing its shape to globular. The second phase happens after the placenta pulls from the uterine wall. The continued contractions cause the expulsion of the placenta within 2 to 30 minutes. After this, the doctor will massage the uterus until it is firm so that the uterine blood vessels constrict and minimize the chances of hemorrhage. The average blood loss for a C-section is 1000mL (Ricci et al., 2021); anything above that is considered severe. My patient had a total blood loss of 890 mL, within normal limits. She was admitted to labor and delivery for a scheduled C-section, so she did not push the placenta through the vaginal canal. The doctors removed the babies, then removed the placenta and went back in and massaged her uterus until it became firm to prevent any hemorrhaging. After everything was safe and within normal limits, they structured her incision closed and covered it with a sterile dressing.

Nursing Diagnosis 1 Risk for bleeding related to postpartum complications as evidenced by the patient having a cesarean section (Phelps, 2020).	Nursing Diagnosis 2 Risk for deep vein thrombosis related to surgery as evidenced by the patient having a cesarean section (Phelps, 2020).	Nursing Diagnosis 3 Risk for infection related to an alteration in skin integrity as evidenced by the patient having a cesarean section (Phelps, 2020).
Rationale for the Nursing Diagnosis This diagnosis was chosen because early identification of potential risks for bleeding provides a basis for implementing appropriate preventive measures (Gulanick & Myers, 2021).	**Rationale for the Nursing Diagnosis** This diagnosis was chosen because the patient underwent surgery, and there is a risk of blood clots after surgery due to the period of inactivity during and after the procedure (Phelps, 2020).	**Rationale for the Nursing Diagnosis** This nursing diagnosis was chosen because the patient underwent surgery and had an open wound. Follow the facility's infection control policy(Phelps, 2020).
Interventions **Intervention 1:** Anticipate conditions and episodes of care that may precipitate bleeding (Phelps, 2020).	**Interventions** **Intervention 1:** Utilizing compression stockings (Phelps, 2020). **Rationale:** Using compression stockings and other	**Interventions** **Intervention 1:** Minimize the patient's risk of infection by washing hands before and after the procedure (Phelps, 2020).

Rationale: Clinicians in high-risk areas (e.g., Trauma, emergency departments, and surgery) must be prepared and aware of patient conditions and changes that could precede a bleeding event (Phelps, 2020). **Intervention 2:** Obtain clinical laboratory tests (e.g., hemoglobin, hematocrit, CBC, thrombin time) and point-of-care tests (Phelps, 2020). **Rationale**: To monitor for trend changes in values that indicate a risk for bleeding or that a bleeding episode is in process (Phelps, 2020).	compression devices helps to increase the blood flow to the deep veins, such as the femoral vein (Phelps, 2020). **Intervention 2:** Ambulating the patient within twelve hours of surgery (Phelps, 2020). **Rationale:** Early ambulation after surgery is vital to recovery because it improves blood flow, speeds up recovery, and reduces the risk of blood clots (Phelps, 2020).	**Rationale:** washing hands before and after providing care. Hand washing is the best way to avoid spreading pathogens (Phelps, 2020). **Intervention 2:** Monitor temperature at least every 4 hours and record it on graph paper (Phelps, 2020). **Rationale:** Sustained temperature elevation after surgery may signal the onset of pulmonary complications, wound infection or dehiscence, urinary tract infection, or thrombophlebitis (Phelps, 2020).
Evaluation of Interventions The patient experiences no incidence of active bleeding (Phelps, 2020).	**Evaluation of Interventions** The patient receives appropriate interventions to protect from blood clots (Phelps, 2020).	**Evaluation of Interventions** The patient's incisions or wounds remain clear, pink, and free from purulent drainage (Phelps, 2020).

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