N432 Labor and Delivery Concept map template

Medications

- Oxytocin (Pitocin)
  - Therapeutic class: Oxytocic hormones
  - Pharmacological class: Oxytocic agent
  - Patient is taking this medication to control uterine hemorrhage.
  - Monitor the intrauterine pressure and fetal heart rate (Jones & Bartlett Learning, 2021).
- Vancomycin
  - Therapeutic class: Glycopeptide
  - Pharmacological class: Antibiotic
  - The patient is likely taking this medication related to the positive GBS test.
  - Monitor serum vancomycin concentration to ensure the dose is appropriate. Also monitor IV site for thrombophlebitis (Jones & Bartlett Learning, 2021).
- Nifedipine
  - Therapeutic class: Antianginal antihypertensive
  - Pharmacological class: Calcium channel blocker
  - This medication is used to prolong pregnancy for a 48-hour period to allow the fetal lungs to mature.
  - When administering nifedipine taper the medication and monitor intake and output (Jones & Bartlett Learning, 2021).
- Betamethasone
  - Therapeutic class: glucocorticoid
  - Pharmacological class: corticosteroid
  - This medication is given to speed up the lung development in preterm babies.
  - Monitor the patient for hyperglycemia and hypokalemia (Jones & Bartlett Learning, 2021).
- Ondansetron
  - Therapeutic class: Antiemetic
  - Pharmacological class: Selective serotonin receptor antagonist
  - Patient was given medication to stop the nausea the patient was felling during the contractions.
  - Monitor the patient for hypokalemia or hypomagnesemia and monitor the patient's electrocardiogram for bradyarrhythmia (Jones & Bartlett Learning, 2021).

Demographic Data

Admitting diagnosis: Preterm Labor

Secondary diagnosis: N/A

Age of client: 28 years old

Weight in kgs: 130 kg pre-pregnant 118.2kg

Allergies: Diltiazem and Penicillin

Date of admission: 4/1/21

Support person present: Patients boyfriend is present for support however he is unable to stay the entire day.

Presentation to Labor and Delivery

28-year-old female was admitted to the hospital at 34 weeks gestations. The patient came to the hospital after having contractions for a few hours. The patient believed that she was having Braxton Hicks contractions. The patient did not specify on the location, durations, characteristic, associating factors, relieving factors, or previous treatment. When the patient arrived at the hospital a vaginal exam was done. It was found that the patient was 2 cm dilated, 80% effaced and -2 stations with an intact bag of water.

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

Baseline EFH:

- Strip 1: 150 bpm
- Strip 4: 150 bpm

Variability:

- Strip 1: Minimal variability
- Strip 4: Moderate variability

Accelerations:

- Strip 1: One acceleration is present
- Strip 4: No accelerations

Decelerations:

- Strip 1: No decelerations
- Strip 4: Variable decelerations present

Contractions:

- Strip 1:
  - Frequency: 2 to 3 minutes
  - Length: 50 to 80 seconds
  - Strength: Not measurable however based on the patient's response they were mild contractions.
  - Patient's response: Patient thought that she was having Braxton Hicks contractions.
- Strip 4
  - Frequency: 1 minute and 25 seconds
  - Length: 60 to 70 seconds
  - Strength: The strength is not measurable however, due to the patient's response the strength likely increased.
  - patient's response: The patient became frantic and reports that she is feeling a lot of pressure.

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Stages of Labor

Stage 1

In the first stage of labor the patient's cervix be… 10 cm. In addition to cervical dilation in the first stage of labor it is common that membrane… r can last 20 hours without being considered prolonged. It is common in the first … ds and are typically described as mild upon palpation from the nurse (Ricci et al., 2021). Th… n dilated and in the active phase of labor

Prenatal & Current Lab Values/Diagnostics

Prenatal lab values	Abnormal values
• WBC: 6.04 (4-11) • RBC: 4.56 (3.50-5.20) • Hgb: 14.2 (11-16) • Hct: 39.9 (34-47) • MCV: 90.1 (80-100) • MCH: 30.0 (26-33) • MCHC: 33 (31-35) • RDW: 13.8 (12-15) • MPV: 11.3 (9-12) • Mono: 4.5 • Eosinophil: 0.2 • Basophil: 0.2 • Blood type is 0+ • Rubella titer is >500 • Hepatitis is negative • VDRL/RPR is negative • Urine GBS done on 10/16/20 was positive	Positive GBS test: this is likely due to a bacterial Infection found in the patient's vagina ALB: 2.6: a decrease in albumin in pregnancy is generally related to increase plasma volume in pregnancy which can dilute the albumin concentration (3.4-5.4) (Pagana, 2019). ALT: 11: This can be an indication of the patient not taking her prenatal vitamins as prescribed (15-52) (Pagana, 2019).

Medical History

Prenatal History: Prenatal care started at 10 weeks, gestational diabetes at 28 weeks, Patient is a G1P0.

Previous Medical History: N/A

Surgical History: Appendectomy at 7 years old.

Family History:

Father: Hypertension

Mother: Breast cancer

Social History: Patient lives with her boyfriend an hour away from the hospital. Both the patient and her boyfriend need to work to pay for their living expenses.

Active Orders

- Continuous fetal monitoring
  - Used to ensure that the fetus is not in distress and to monitor the heart rate.
- IV of Lactated Ringers to run 100 ml/hr
  - This is used to replace water and electrolyte loss. Adequate hydration can reduce uterine contractility.
- Bed Rest with bathroom privileges
  - This is to reduce any uterine activity.
- Intake and output
  - To ensure that the patient is not retaining any fluids
- 2200 calories ADA diet
  - To control the patient's gestational diabetes
- Accuchecks: fasting, ac breakfast, ac lunch, ac dinner, and at HS
  - Monitor patient for hyperglycemia/hypoglycemia due to the patient's gestational diabetes.
- Q4 Vital signs
  - To ensure the patient Is stable.
- Urine sample for culture and sensitivity
  - This is to show if the patient has any signs of infections.
- GBS culture
  - This is to show if the patient has any signs of infections.
- Type and screen
  - To obtain the patients' blood type in case the patient needs to have a blood transfusion.
- CBC with differential and Complete metabolic panel
  - To monitor the patients hemodynamic state and electrolyte balance

…ring the pushing stage the mother is feeling rectal pressure by the fe… the urge to push. There is an increase in bloody show. The fetal head will become more apparent at the vaginal opening but disappears between the contractions. Once the head is no longer regressed between contraction, the baby has crowned. During stage 2 of labor the patient's heart rate and blood pressure remain high until the baby has been delivered (Ricci et al., 2021). During the second stage of labor instruct the patient on quality pushed, provide positive feedback as the patient pushes, and repeat the doctors' instructions.

In the case study does not have too much information about the patient in stage 2 of labor however, we know that the patients' contractions became more frequent, and the fetal heart rate tracing began to change quickly. The patient became frantic and had a lot of pressure in her bottom. The staff set up for delivery and a male infant was born at 828 am on 4/3/21 after 4 pushes. The case study does not show the patients vitals or labs during this time however, it would be expected that the patient's heart rate is elevated due to the pain and pushing in this stage.

Stage 3 The third stage of labor begins with the birth of a newborn, and it ends with the separation of the placenta. The third stage consists of two phases the placental separations and the placental expulsion. During the placental separation the uterus continues to contract strongly and now retracts. The contractions cause the placenta to pull away from the uterine wall (Ricci et al., 2021). When the uterus rises upward, the umbilical cord lengthens, a sudden trickle of blood is released from the vaginal opening, and the uterus changes in shape to globular the placenta is ready to be delivered. During the placental expulsion phase the placenta is expelled, and the uterus is massaged briefly by the physician until it is firm (Ricci et al., 2021). This is so that the uterine blood vessels constrict, minimizing the possibility of hemorrhage. The normal blood loss is approximately 500 mL from a vaginal birth. On expulsion the placenta is inspected for its intactness to make sure all sections are present. If any piece is still attached to the uterine wall, it can put the woman at risk for postpartum hemorrhage. During the third stage of labor vital signs begin to go back to normal after the patient has delivered the baby (Ricci et al., 2021). During this stage, coach the patient in relaxation for delivery of the placenta, encourage skin-to-skin contact, and administer prophylactic oxytocin as ordered. During the patient's stage 3 of labor, after the placenta was delivered at 8:35 am with a gush of blood estimated to be 350 ml. A uterine massage was started, and the patient was given 40 units of Pitocin with 1000ml of lactated ringers at a rate of 500 ml/hr. Currently the patients' vitals were, Pulse 110, Respirations: 18, Blood pressure 110/65 and o2 saturation 97%.

Nursing Diagnosis 1 Risk for infection related to rupture of amniotic membranes as evidence by a positive Nitrozene and Amnisure test (Phelps, 2020).	**Nursing Diagnosis 2** Acute pain related to strong contractions during labor as evidence by the patient expressing pain and discomfort during labor (Phelps, 2020).	**Nursing Diagnosis 3** Deficient knowledge related to lack of exposure to breastfeeding as evidence by patient stating she doesn't know anything about breastfeeding (Phelps, 2020).
Rationale for the Nursing Diagnosis The reason that this nursing diagnosis was chosen was because the patient is at risk for infection after a rupture of amniotic membranes. This risk should be addressed to ensure that the patient does not become infected.	**Rationale for the Nursing Diagnosis** This nursing diagnosis was chosen due the patient expressing pain and discomfort. It is important to address the patient's need to ensure that she is more comfortable.	Rationale for the Nursing Diagnosis This nursing diagnosis was chosen due to the patient expressing an interest in breastfeeding. Since the patient is the first person in her family to breast feed it is important, she gets educated on the topic.
Interventions **Intervention 1:** Monitor the patient vitals for signs of infections. **Rationale:** This will help to identify if the patient	**Interventions** **Intervention 1:** Reposition the patient, if possible, to make her more comfortable. **Rationale:** This could help the patient find a more	**Interventions** **Intervention 1:** Assess the patient's level of knowledge, willingness, and ability to learn. **Rationale:** The purpose of this is to assess if the

has an infection. It is especially important to monitor the patient for a fever as this will be a good sign, she has an infection. **Intervention 2**: Monitor the patients labs for any signs of infections. **Rationale:** It is important to monitor the patients' labs for any signs of infections. Particularly it is important to monitor the patients WBC as if this is elevated it is likely the patient has an infection.	comfortable position and relieve some of the pressure from the contracting. **Intervention 2:** Encourage the patient to walk around if she can. **Rationale:** This can help distract the patient from the pain but also ease the pain of the contractions.	patient is ready to learn and how they learn. Knowing this can help to know how to best teach the patient. **Intervention 2:** Educate the client on breast feeding then provide time for questions and clarifications. **Rationale:** The purpose of this is to teach the client on the subject and to allow time for the client to ask questions that they may not have understood. This will ensure that the patient understands the teaching and if she doesn't the nurse can change the way she is teaching the patient.
Evaluation of Interventions Unable to evaluate the interventions as this was a case study. However, ideally the patients' labs would be with in normal limits and so would the vitals. If this was not the case, we would notify the physician.	**Evaluation of Interventions** Unable to evaluate the interventions since this was a case study however, the ideal outcome would be that the patient felt relief from these interventions. If the patient did not feel relief, it is possible to reach out the physician and as for pain medication i.e., an epidural.	**Evaluation of Interventions** Unable to assess the interventions however, the ideal outcome would be that the patient understood the teaching and felt confident in her ability to breastfeed.

References (3):

Jones & Bartlett Learning. (2020). *2021 Nurse's Drug Handbook* (19th ed.). Jones & Bartlett Learning.

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Phelps, L.L. (2020). *Sparks and Taylor's nursing diagnosis reference manua*l (11th ed.). Wolters Kluwer.

Ricci, S. S., Kyle, T., & Carman, S. (2021). *Maternity and pediatric nursing* (4th ed.). Wolters Kluwer.