

Prenatal Lab Values Diagnostics

UA Dip

Specific Gravity: ≥ 1.130 (H!!)

Normal Value Range: 1,000 - 1,030 (Pagana et al., 2018)

Relevance: could be high due to dehydration from being NPO or current UTI.

UA Mucus: Present

Normal Value Range: Negative (Pagana et al., 2018)

Relevance: can be present due to UTI.

UA Glucose: 160 mg/dL (H!!)

Normal Value Range: < 140 mg/dL (Pagana et al., 2018)

Relevance: could be high due to gestational diabetes but patient has it controlled via diet.

Current Lab Values/Diagnostics

- All Current Labs are within normal limits

Demographic Data

Admitting diagnosis: Term Induction Pregnancy

Secondary diagnosis: Gestational Diabetes

Age of client: 31

Weight in kgs: 104.9 kg

Allergies: Lemon/Grass - Unknown Reaction (Date unknown), Shrimp - Face swelling/Vomiting Reaction (Date not listed on chart).

Date of admission: 06/06/2023

Support person present: Husband

Medical History

Prenatal History:

- Gravada: 4th pregnancy (1 - ectopic pregnancy)
- Term: 0
- Pre-term: 0
- Abortions: 2
- Living Children: 0

Previous Medical History: Asthma (Date - Unknown), Migraine (Date: unknown)

Surgical History: None

Family History:

Father: Diabetes, Breast Cancer, Heart Disease

Social History:

- **Smoking:** none
- **Vape:** Never
- **Alcohol:** Not currently due to pregnancy, 1-2 drinks of wine per week
- **Drugs:** None

Active Orders

- **Diabetic Diet - 06/07**
 - Note: Patient started on NPO at 1030am due to epidural given.
- **Continuing Fetal Monitoring - 06/07**
 - Due to moderate variability
- **Blood Glucose q4hrs - 06/07**
 - Reasoning: Due to NPO in latent labor
- **Blood Bank Hold Tube (low risk) - 06/06**
 - Reasoning: Blood typing and for giving blood due to labor hemorrhaging.
- **Avoiding Supine Position (Continuous) - 06/06**
 - Reasoning: position causing compression on the inferior vena cava.

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

Baseline FFM:

- **Beginning:** 150 beats/min
- **End:** 156 beats/min

Variability:

- **Beginning:** Moderate variability with changes of 20 - 60 beats variability
- **End:** Minimal variability with changes of < 8 beats/min.

Accelerations:

- **Beginning:** Absent Accelerations
- **End:** Absent Accelerations

Decelerations:

- **Beginning:** Early Decelerations
- **End:** Early Decelerations

Contractions: Beginning shift

- **frequency:** every 4 - 7 mins and is irregular
- **length:** Last about 80 - 120 secs
- **strength:** Unable to assess strength but patient stated that the contractions is rated about a 8/10
- **patient's response:** Patient response to contraction is unpleasant and felt like they needed to rest and save their energy for when the active labor phase begins.

Contractions: End shift

- **frequency:** every 2 - 3 mins and is irregular
- **length:** Last about 80 - 120 secs
- **strength:** Unable to assess strength but patient stated that the contractions is rated about a 8/10
- **patient's response:** Patient response to contraction is unpleasant and felt like they needed to rest and save their energy for when the active labor phase begins.

Medications

Ampicillin

Pharmacologic Class: Aminopenicillin
 Therapeutic Class: Antibiotics
 Dose/Frequency: 1g - 60m/6hr - IV Push
 Reason to take: use to treat infection that can cause infection for the infant.
 Nursing Assessments: Medication is safe to use during labor. Medication is to be given long duration infuse rather than fast due to seizure side effects (Jones & Bartlett Learning, 2020).

Carboprost, Tromethamine (Hemabate)

Pharmacologic Class: Prostaglandin Analog.
 Therapeutic Class: Oxytocics
 Dose/Frequency: 250 mcg IM injection - Daily
 Reason to take: Used for Postpartum hemorrhage
 Nursing Assessments: The nurse should assess the amount of bleeding, maternal vital signs to compare with initial data, signs for shock, and condition of the uterus. Medication can cause increase blood pressure. (Jones & Bartlett Learning, 2020).

Fentanyl - PC Injection (Stesolid)

Pharmacologic Class: Controlled Opioid Substance Schedule II
 Therapeutic Class: Opioid Analgesics
 Dose/Frequency: 50 mcg Injection- q2hrs/PRN - IV Push
 Reason to take: for moderate pain of 3 - 4/10 level
 Nursing Assessments: assess oxygen saturation and respiration after administration for respiratory depression. Medication can prolong labor (Jones & Bartlett Learning, 2020).

Insulin (Upro) (Humalog)

Pharmacologic Class: Pancreatic Hormone
 Therapeutic Class: Rapid-Acting Insulin
 Dose/Frequency: 1 - 20 units per sliding scale TID - Sub Q Injection

- 120 - 135: 2 units
- 140 - 154: 4 units
- 160 - 175: 6 units
- 180 - 199: 8 units
- ≥ 200: notify provider.

Reason to Take: Gestational Diabetes
 Nursing Assessments: Monitor blood glucose levels and 50 mins -1 hour before meals due to major adverse reaction such as hypoglycemia. Upro should be given 15 minutes before meal. (Jones & Bartlett Learning, 2020).

Oxytocin 0.9% NaCl

Pharmacologic Class:
 Therapeutic Class: Oxytocics
 Dose/Frequency: 30 units/500ml - 2-30 units/min or 2 - 3 ml/kg- q2hrs/PRN - IV Push
 Reason to take: to stimulate uterine contraction for vaginal delivery of an infant
 Nursing Assessments: medication can cause hyperstimulation of uterine contractions which can lead to uterine rupture and hemorrhage. Monitor the mother for any signs of decreased consciousness (Jones & Bartlett Learning, 2020).

Presentation to Labor and Delivery

Pregnant patient came in for a scheduled induction on 06/06/2023 at champaign-urbana carle hospital. Patient is currently at 39-week gestation. This is #4 gravida (had 3 prior to the current), 0 full term pregnancies (except for the current pregnancy), 0 preterm pregnancies, 2 abortions (first and third pregnancies), 0 living children, and 1 ectopic pregnancies (second pregnancy). Patient had a amniotomy done to break the amniotic sac and was also given oxytocin to induce labor and softening the cervix. Patient started at 2 cm dilated and then progressed to 7 cm dilated (on nursing student observation day.) Cervical dilation was a slow progression that continued within almost 3 days. The Patient stated that the contractions were really intense/painful and rated them as 8/10. The patient stated that they did not had any other associated symptoms beside mucus urinations about every 2-3 hours. The patient still remained in the passive phase of labor during the clinical time of observation.

Stages of Labor

Stage 1

s/s of stage 1 labor: include blood-stained mucus discharge, lower back pain, urge to vomit or feeling of nausea progressive dilation of cervix, abdominal cramping, and uterine contraction about every 5 - 10 minutes that last about 30 - 45 seconds (Ricci et al., 2020).

Expected findings (V/S or labs) of stage: Hemoglobin and hematocrit are slightly low

how to identify the stage: Contraction intensity/frequency increases, Discomfort intensifies from moderate to strong, and Cervix softened progresses from 0 cm to 10cm (enough for the fetal head to pass through) (Ricci et al., 2020).

Nursing Interventions/Treatments of stage: Encourage patients to be continually active to maximize the effect of uterine contractions, Upright maternal positions are recommended if tolerated, Assist patient in assuming her position of comfort, left-side lying is recommended to avoid disruption in fetal oxygenation, maternal heart rate and blood pressure and fetal heart rate should be monitored continuously, performing vaginal examination to evaluate effacement and dilation progress, monitoring fetal strips of accelerations/decelerations/variability, checking amniotic fluid for meconium staining/odor/ and amount (Ricci et al., 2020).

Pt. Assessment Finding: Patient was having some lower back pain, blood-stained mucus discharge, Contraction about every 5 -15 mins that lasted for 30 - 50 secs, Cervical dilation from 0cm to 7cm (was not for sure if patient went to full dilation for active labor due to clinical time).

Pt. Clinical Data: Most of the patient's labs like CBC with differentials and BMP were all normal except for urinalysis. UA specific gravity show that it was elevated, UA mucus was present, and UA glucose shows that it was above 140 mg/dL. The patient also had contractions that were every 5 - 15 mins and lasted for 30 - 50 secs. The intensity of the contractions were intensifying for moderate to strong. patient did lay on left side-lying for comfort, and as well as tripod position.

Nursing Students observation of the clinical day: I was able to observe the day of clinical that my patient had a plan to got all natural labor without the use of pharmacological assistants but then ultimately needed an epidural due to extreme fatigue in the passive phase of labor while only being 6 cm dilated and only ending up being 7 cm dilated (possibly prolonging time of inducement). The Patient was very active and ambulating during passive labor, they were doing short mini exercises to assist with labor and was even using a giant ball for certain leg stretches. The epidural did seem to be the rest choice for the patient labor to rest until the actual time of active labor presents later on.

Stage 2

Signs/Symptoms of stage include: longer/stronger contractions with 1-2 mins of rest between, pressure in the sacral area, eventual desire/urge to push or stimulate vagal response, cramps/nausea/vomiting are present, stretching/burning feeling in the vaginal area, cervix is fully dilated about 10cm until the birth of infant (Ricci et al., 2020).

Expected Findings (V/S or labs) of stage: Contractions are about 2-5 mins apart and last to 60 - 90 seconds (Ricci et al., 2020),

How to Identify the stage: Contractions are very short from one to another, Pressure present in the sacral/vaginal area, Mother is pushing or has feeling pushing (Ricci et al., 2020).

Nursing Interventions/Treatments of stage: Lithotomy position with feet up in stirrups, semi-sitting with pillows underneath knees, arms, and back, squatting to support legs and give sense of control, kneeling with hands on bed, providing continuous comfort measures such as mouth care/position changes, changes in underpad, education instruction on bear-down techniques/positions (Ricci et al., 2020).

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Stage 3

Signs/Symptoms of stage: a gush of blood at the vaginal site, umbilical cord lengthening due to birth of neonate, and Firm contraction of uterus, placental separation/delivery (Ricci et al., 2020).

Expected Findings (V/S or labs) of stage: Hematocrit/hemoglobin is decreased due to some blood loss.

How to Identify the stage: This stage is identifiable when the neonate is born and placenta delivery is present (Ricci et al., 2020).

Nursing Interventions/Treatments of stage: Interventions include instruction on pushing, providing support/information about episiotomy if lacerations are present, assess/educating knowledge of breastfeeding/latching, and assisting on transferring to recovery area (Ricci et al., 2020).

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<p align="center"><u>Nursing Diagnosis 1</u></p> <p>Labor Pain Related to scheduled induction as evidence by have uterine contractions in stage 1 of labor, cervical dilation form 5 -7 cm, and is given a IV infusion of Oxytocin NaCl .9 for increasing uterine contractions</p>	<p align="center"><u>Nursing Diagnosis 2</u></p> <p>Risk for bleeding related to common pregnancy complication such as vaginal tearing or perinium tearing as evidence by patient being in the 1 stage of labor (passive), cervix dilation is at 7 cm, patient has bloody mucus discharge, and the blood bank has type her blood and has a hold on blood in case of bleeding in the active phase of labor.</p>	<p align="center"><u>Nursing Diagnosis 3</u></p> <p>Anxiety Related to prolonged induction pregnancy as evidence by patient receiving an epidural to rest for active phase of pregnancy, patient did had 2 abortions and 1 ectopic pregnancy prior to current.</p>
<p align="center"><u>Rationale for the Nursing Diagnosis</u></p> <p>The nursing diagnosis is relevant to the patient due to being in the 1 stage of labor.</p>	<p align="center"><u>Rationale for the Nursing Diagnosis</u></p> <p>This is relevant to my patient due to getting closer to the active phase of labor and is having bloody mucus discharge.</p>	<p align="center"><u>Rationale for the Nursing Diagnosis</u></p> <p>This is relevant to the patient due to past complication pregnancy, currently has gestational diabetes, and stating that they are anxious about resting before the active phase of labor.</p>
<p align="center"><u>Interventions</u></p> <p>Intervention 1: Assist the patient and support person about techniques to decrease the discomfort of labor. Rationale: relaxation and slow deep breathing helps with lowering discomfort of contractions</p> <p>Intervention 2: assist the patient to make use of a pillow to be more comfortable Rationale: use of a pillow in position change can reduce stiffness and pain discomfort.</p>	<p align="center"><u>Interventions</u></p> <p>Intervention 1: Monitor vital signs for factors of bleeding Rationale: low blood pressure and a high pulse could indicate loss of blood</p> <p>Intervention 2: Obtain labs tests such as Hemoglobin and hematocrit, thrombin time, and CBC. Rationale: To monitor trend changes that increase risk of bleeding.</p>	<p align="center"><u>Interventions</u></p> <p>Intervention 1: Give the Patient clear, concise explanations, about any occurrences while avoiding information overload. Rationale: This results in the patient being less anxious.</p> <p>Intervention 2: Give patient time and a chance to express any concerns or validate their own feelings. Rationale: This reduces patient bottled-up feelings.</p>
<p align="center"><u>Evaluation of Interventions</u></p> <p>Patients will make use of strategies to decrease pain and discomfort. The patient will also express satisfaction of pain control.</p>	<p align="center"><u>Evaluation of Interventions</u></p> <p>The Patient will receive appropriate intervention to protect from bleeding episodes. Patients will experience no incidence or active bleeding.</p>	<p align="center"><u>Evaluation of Interventions</u></p> <p>The Patient will make decisions, and show greater independence, and decrease level of anxiety. Patient will communicate with the nurse or family about concerns and will gain reassurance.</p>

N432 Labor and Delivery Concept Map - J.M.

References (3):

Jones & Bartlett Learning. (2020). *2021 Nurse's drug handbook* (20th ed.).

Pagana, K., Pagana, T., & Pagana, T. (2018). *Mosby's diagnostic and laboratory test reference* (14th ed.). Mosby.

Ricci, S., Ricci, S. S., Kyle, T., Kyle, T., & Carman, S. (2020b). *Maternity and Pediatric Nursing*. LWW.