

Parent and Newborn Nursing Case Study

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Patient Introduction

- The patient, S.R. is 41 years old.
- She is gravida three, para one.
- She came to the hospital in an ambulance because of increasing abdominal pain related to contractions.
- She was in the ER earlier the same evening after falling onto her abdomen, and was discharged.
- Drug allergies: Vicodin, Codine, Sulfa, Bacterium, Cipro and Flagyl.
- She works outside the home, and her support person is her husband who was present for the birth.
- No tobacco, drug, or alcohol usage during pregnancy.
- Two previous spontaneous abortions.

Complications

- Complications during pregnancy include advanced maternal age, a history of two LEEP's, two spontaneous abortions, and gestational diabetes mellitus.
- Complications during labor and delivery include meconium staining, and late decelerations of the FHR.
- Complications of the newborn include mild respiratory distress.



OB History and Pathophysiology

- Past medical history of human papilloma virus.
- Family history of congenital heart defects, hypertension, and diabetes mellitus.
- LMP: December 12th, 2009.
- EDD: September 19th, 2010.
- This patient was considered high risk during her pregnancy due to her history of abortions, advanced maternal age, and gestational diabetes.
- GBS negative, Rubella immune, Hepatitis B negative
- Blood type: O negative



Labor and Delivery

- Labor began September 12th, 2010 at 2100 hours.
- Patient was 2 cm dilated and 100% effaced upon admission.
- Her membranes were ruptured at 2200 hours and contained thick meconium.
- An intrauterine catheter and fetal scalp monitor were placed.
- An epidural, Pitocin, and an amnioinfusion were started.
- Baby was in a vertex position at -3 station.
- Labor progressed with variable, as well as late decelerations.
- The patient delivered a baby girl vaginally at 0609.
- Placenta was delivered and intact.
- Labor duration was 9 hours.
- The umbilical cord had all three vessels, and the cord blood was retrieved.
- The patient sustained a first degree periurethro laceration.

Advanced Maternal Age

- Expectant mothers over the age of 35 are considered to have an advanced maternal age and are considered high risk.
- Maternal complications include increased risk of maternal death, preeclampsia/eclampsia, preterm labor, gestational diabetes, placenta previa, difficult labor, and an increased rate of cesarean section.
- Fetal complications include a higher rate of Down syndrome, low birth weight, premature birth, and complications related to maternal complications.



Gestational Diabetes

- Gestational Diabetes Mellitus is the intolerance of carbohydrates occurring during pregnancy.
- GD causes a resistance to insulin which causes an increased level of glucose to remain in the bloodstream.
- This glucose is able to pass through the placenta to the fetus, increasing the fetus' glucose levels. The fetus then produces increased amounts of insulin to compensate.
- After delivery the baby is at risk for hypoglycemia.



Gestational Diabetes

- The patient's one hour glucose test result was 169 mg/dL.
- Results of the three hour fasting glucose test were 173 mg/dL, 167 mg/dL, and 141 mg/dL.
- Elevations of the second and third results indicated that the patient had gestational diabetes mellitus.
- The patients gestational diabetes was diet controlled throughout her pregnancy.



Spontaneous Abortion

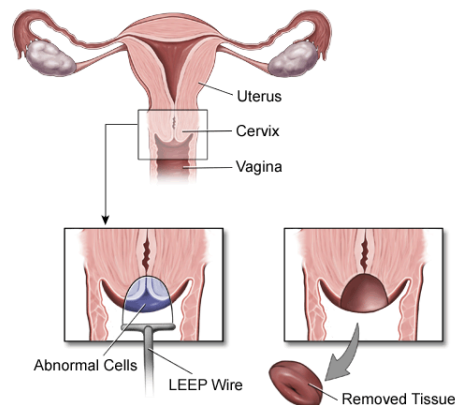
- An abortion is the expulsion of an embryo or fetus before 20 weeks gestation, or viability.
- Possible causes of spontaneous abortion include:
 - Chromosomal abnormalities and disorders such as inherited thrombophilias, active protein C resistance, and prothrombin mutations.
 - Physiological and environmental causes include teratogens, abnormal implantations, cervical insufficiency, placental abnormalities, endocrine imbalances, and maternal disease or infection.



Human Papilloma Virus (HPV)

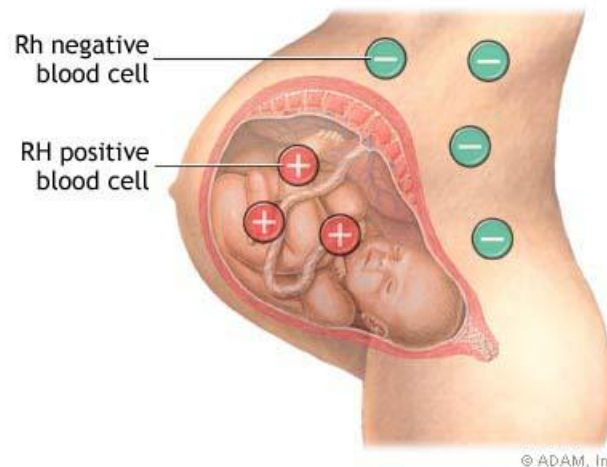
- HPV has 120 different subtypes, 30 of which can infect the genital tract.
- HPV can manifest as genital warts, cervical dysplasia, or anogenital cancer.
- It causes 90% of genital wart infections, and 70% of cervical cancers.
- If abnormal growths are found on the cervix, vagina, or vulva the physician may perform a loop electrosurgical excision procedure (LEEP).
- The patient received two LEEP's to her cervix.

Loop Electrosurgical Excision Procedure (LEEP)



Alloimmunization

- Alloimmunization occurs when an Rh negative mother is exposed to the Rh positive blood type of her fetus.
- After exposure, the mother will produce antibodies against the Rh positive type.
- Once this occurs, the mother will be unable to carry another Rh positive fetus because the antibodies will attack the fetus causing hemolysis of the fetal red blood cells.
- RhoGAM (anti-Rh immunoglobulin) prevents the development of long term active Rh antibodies. It is given to all mothers who are Rh negative and carry an Rh positive fetus.



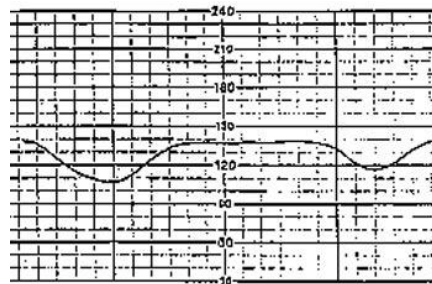
Meconium Staining

- Meconium is stool that is formed in utero, and consists of amniotic fluid, intestinal secretions, and mucosal cells.
- It is thick, tarry, and black or dark green.
- Meconium is the first stool that is passed by the infant, and normally this occurs after birth.
- Occasionally this occurs in utero, and contaminates the amniotic fluid.
- Risks to the infant include asphyxia, meconium aspiration, and pneumonia related to meconium aspiration.



Late Decelerations

- Late decelerations are a decline in fetal heart rate, caused by uteroplacental insufficiencies.
- They are marked by a gradual decline of the FHR by more than 10-20 bpm.
- They are characterized by starting at the acme of a contraction, and returning to baseline before the start of the next contraction.
- Late decelerations are considered ominous because the fetus is experiencing decreased blood flow and oxygenation, and immediate intervention is needed.



Amnioinfusion

- Because S.R. was experiencing both late decelerations of the FHR, and thick meconium staining, and amnioinfusion was performed.
- An amnioinfusion is a procedure in which warm, sterile lactated ringers or saline is infused into the uterus via an intrauterine catheter.
- It is used to increase the amount of fluid in the uterus, thus relieving stress on the fetus.
- It is also used to dilute amniotic fluid when medium to heavy meconium staining has occurred.



Lab Results

Prenatal Tests	Norms	Patient Results	Analysis
Type & Rh		O negative	
Hematocrit & Hemoglobin	37-47% & 12-16%	37.6 & 12.7	WNL
VDRL/RPR	Negative	Negative	WNL
Rubella		Immune	Positive Finding
Group B	Negative	Negative	Positive Finding
Hepatitis B	Negative	Negative	Positive Finding
Chlamydia & Gonorrhea	Negative	Negative	Positive Finding
Triple Screen			
One-hour Glucose	<140 mg/dL	169 mg/dL	GDM
Glucose Fasting			GDM
1 hour	180 mg/dL	173 mg/dL	
2 hour	155 mg/dL	167 mg/dL	
3 hour	140 mg/dL	141 mg/dL	



Medications



Intrapartum Medications	Purpose	Mechanism	Ordered Dosage	Route	Safe Dosage
Bicitra	Antiurolithic	Converted to bicarbonate in the body, resulting in increased blood pH; neutralizes gastric acids.	30 mL	Oral	10-30 mL diluted in water, four times daily.
Nubain	Opioid Analgesic	Binds to opiate receptors in the CNS, altering the perception of and response to painful stimuli.	10 mg	IV Push	10 mg q 3-6 hours, single dose not to exceed 20 mg.
Pitocin	Oxytocics	Stimulates uterine smooth muscle, producing uterine contractions similar to those in spontaneous labor.	40 units	IV	0.5-2 milliunits per minute. Increase by 1-2 milliunits per minute q15-60 min until pattern established (usually 5-6 milliunits per min; maximum 20 milliunits per minute), then decrease dose.
Lactated Ringer	Isotonic Fluid	Helpful in hypotension caused by hypovolemia – Gestational Diabetes.	1000 mL	IV	



Medications



Postpartum Medications	Purpose	Mechanism	Ordered Dosage	Route	Safe Dosage
Americaine	Anesthetic	Inhibition of sensory nerve impulses.	1 application	Topical	Apply as needed
Adacel	Tetanus toxoid, reduced diphtheria toxoid and acellular pertussis vaccine absorbed.	Locally acting anti-inflammatory action in the colon, where activity is probably due to inhibition of prostaglandin synthesis.	0.5 mL	IM	Immunized: 0.5 mL IM booster every 10 years.
Docusate Calcium	Laxative	Prevention of constipation (in patients who should avoid straining, such as after MI or rectal surgery).	240 mg	PO	240 mg once daily.



Medications



Postpartum Medications	Purpose	Mechanism	Ordered Dosage	Route	Safe Dosage
Ibuprofen	Non-opioid analgesics	Decreased pain and inflammation	600 mg	PO	<i>Anti-inflammatory:</i> 400-800 mg 3-4 times daily (not to exceed 3200 mg/day). <i>Analgesic/Anti-dysmenorrheal/antipyretic:</i> 200-400 mg q4-6hr (not to exceed 1200 mg/day).
Prenatal Vitamin	Vitamin	Prevention and treatment of vitamin deficiencies. Prenatal vitamins contain higher doses of folic acid.			



Medications



Postpartum Medications	Purpose	Mechanism	Ordered Dosage	Route	Safe Dosage
Rhophylac	Vaccine, immunizing agent	Prevents the production of anti-Rh antibodies in Rh negative patients who were exposed to Rh positive blood.	300 mcg	IM	One vial standard dose (300 mcg) within 72 hours of delivery.
Tylenol	Antipyretic, non-opioid analgesic.	Inhibits synthesis of prostaglandins that may cause pain or fever.	650 mg	PO	325-650 mg every 4-6 hours, not to exceed 4000 mg daily.

Nursing Diagnosis Nutrition

Nursing Diagnosis:

Risk for imbalanced nutrition, potential for more than body requirements related to: increased weight related to pregnancy, as evidence by patient gaining 32 pounds during pregnancy, and patient admitting to “liking to snack a lot” (Carpentino-Moyet, 2007).

Goal:

The patient will make healthy choices of food, and increase activity level by walking room and unit during stay.



Nursing Diagnosis

Nutrition

Interventions:

- 1) **Intervention:** Encourage patient to walk around the unit, while receiving hospital care.
Rationale: By encouraging the patient to walk it will promote an increased level of activity, which will prevent increased weight related to activity intolerance.
- 2) **Intervention:** Teach patient proper nutritional choices.
Rationale: By teaching the patient proper nutritional choices it allows for the patient to make healthier choice, which will promote healthy weight loss.
- 3) **Intervention:** Encourage the patient to drink water instead of sweetened beverages.
Rationale: By drinking more water and less sweetened beverages the patient will not consume “empty” calories, and also feel fuller which will prevent less snacking (Evert & Hei, 2006).
- 4) **Intervention:** Encourage patient to continue breastfeeding.
Rationale: “Mothers who breast feed show higher knowledge of healthy food choices, as well as lower retention of pregnancy weight” (Nuss et al., 2007).

Evaluation of Goal:

Patient was observed eating a salad and increasing her level of activity by walking around her room by the end of my shift.

Nursing Diagnosis Physiological

Nursing Diagnosis:

Risk for acute pain related to postpartum involution as evidence by patient states pain is 5 or 6 out of 10 in abdomen; where one is nonexistent pain and 10 is severe pain (Carpentino-Moyet, 2007).

Goal:

The patient will receive adequate pain relief which will be measured by patient rating her pain as 2 or below.



Nursing Diagnosis

Physiological

Interventions:

1) **Intervention:** Encourage patient to void frequently.

Rationale: Increased urine volume can cause pressure on the uterus, causing inability for the uterus to contract, thus causing increased pain. (Davidson et al., 2008)

2) **Intervention:** Encourage patient to ask for pain medication before pain becomes too severe.

Rationale: Pain is easier managed when less severe, and also a lesser dose will adequately manage pain. Less pharmacological intervention provides less chance of medication side effects as well as: dependence and transmission to infant via breast milk.

3) **Intervention:** Teach patient relaxation techniques such as deep breathing, and thought diversion.

Rationale: Deep breathing and thought diversion decreases the need for pharmacological intervention. It has been found that relaxation techniques should be included in prenatal teaching during the last trimester of pregnancy (Hanson et al., 2009).

4) **Intervention:** Encourage patient to place a warming pad, or warm water bottle on abdomen to relieve pain.

Rationale: The warmth will help decrease the pains from involution, decreasing the use of pharmacological agents (Davidson et al., 2008).

Evaluation of Goal:

Patient reported a pain level of 2 after urination. At the end of the shift, the patient still reported pain at a 2 after medication administration and normal voiding.

Nursing Diagnosis Educational

Nursing Diagnosis:

Risk for impaired parenting related to lack of knowledge about caring for a newborn, as evidenced by patient expresses concerns about lack of knowledge concerning umbilical cord care, and also consultation with lactation consultant (Carpentino-Moyet, 2007)

Goal:

Patient will demonstrate proper infant care techniques before discharged to home.



Nursing Diagnosis Educational

Interventions:

1) Intervention: Encourage patient to attend going home classes that teach newborn care.

Rationale: It was found that patients attending small groups that include other postpartum mother are preferred. Patients appreciate having an educated professional that can present information in a simple manner, answer questions, and gives plenty of time for practicing (Nolan, 2009). Also by attending classes the patient and her partner can interact with other new parents to relieve anxiety.

2) Intervention: Encourage patient to voice any concerns regarding new born care.

Rationale: By asking the patient if she or her significant other has any concerns or questions it opens up opportunities to teach patient, and answer questions.

3) Intervention: Provide patient with information to take home.

Rationale: Providing the patient with information to take home allows for reference material in case the patient forgets information

4) Intervention: Encourage patient to keep a list of questions to ask care providers.

Rationale: Keeping a list of questions allows the parents to ask questions that may have otherwise been forgotten to health care providers.

Evaluation of Goal:

By the end of my shift the patient verbalized understanding of how to perform adequate umbilical cord care, as well as expressed willingness to attend the teaching class offered the next morning.

Nursing Diagnosis Psychological

Nursing Diagnosis:

Risk for situational low self-esteem related to post pregnancy body appearance as evidence by patient stating “she looks horrible” and “her stomach looks horrible.” (Carpentino-Moyet, 2007).

Goal:

Patient will express positive body image and ways to achieve pre-pregnancy body.



Nursing Diagnosis Psychological

Interventions:

- 1) **Intervention:** Allow the patient to voice concerns of current body image (Carpentino-Moyet, 2007).

Rationale: By allowing patient to talk to someone about her current concerns related to her body image lets the patient talk through her feelings instead of developing low self esteem. The development of low self-esteem could cause an increased risk of postpartum depression.

- 2) **Intervention:** Help the patient find positives in her situation (Carpentino-Moyet, 2007).

Rationale: Helping the patient find positives in her situation such as her belly is stretched because it provided a loving home to her new baby for nine months will allow the patient to look at the good things that resulted from her “horrible looking” stomach. This allows the patient to build positive self esteem, instead of negative.

- 3) **Intervention:** Teach the patient that changes to her post pregnancy are normal.

Rationale: By teaching the patient what the normal body changes are related to post pregnancy the patient will be able to understand that she is not alone.

- 4) **Intervention:** Help the patient to develop a plan and goals to return to her pre-pregnancy body.

Rationale: By having a plan and achievable goals the patient will feel empowered, reducing the risk of low self esteem and possible depression. Also by developing a plan the patient can continue with meeting her goals at home, patients who are discharged to home within 72hrs of delivery show no significant increase in mental issues then if they would have stayed in the hospital longer (Bueno et al., 2005)

Evaluation of Goal:

At the end of the shift the patient was ready to get up and take a shower and get out of her hospital gown into her personal clothing. This displays that the patient is coping well with the changes in her body and is not showing signs of increased low self-esteem or depression.

Conclusion

- Despite the complications and problems that existed, S.R. and her baby remain healthy.
- S.R. was bonding well with her baby, and enjoyed providing skin to skin care with the infant and taking everything in.
- She seemed to be transitioning to her new role as mother rather well.
- The only concern for S.R. is that it is possible she will not have another successful pregnancy because of her past obstetrical history.



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