

Scenario 4: Sickle Cell

- 1) What is the relationship between fluid and oxygen therapy in the treatment of sickle cell anemia?
 - The relationship between fluid & oxygen therapy in this treatment is that oxygen may be beneficial for some patients with this disease. Oxygen may prevent vaso-occlusion to occur and the disruption of tissue oxygenation that could often lead to a very painful sickle cell crisis. Fluid is important to help our patients stay hydrated which can prevent them from having a vaso-occlusive crises, pain crises, or infections. To prevent these crises, they can't be dehydrated so we keep them hydrated always.

- 2) What complications might Brittany Long face if her symptoms are not recognized and treated in a timely manner?
 - The complications she can face if she's not treated in a timely manner is that she could be getting a cerebrovascular accident. Sickle- shaped cells can block small blood vessels in the brain. Another complication that could occur could be acute chest syndrome. This is very intense chest pain caused by the sickling of cells in the lungs. It could result as sickling in the small blood vessels in the lungs.

- 3) Document the patient teaching that you would provide for Brittany Long and her family before discharge, including disease process, nutrition, signs and symptoms of crises, prevention of infection and dehydration, and pain management.
 - **Disease process:** I would provide that sickle cell anemia is the abnormal hemoglobin caused by RBCs to become misshapen, sticky, and rigid. Since this is a recessive genetic disorder, both parents must pass the defective form of the gene for a child to be affected. If only one parent passes the sickle cell gene the child will have this sickle cell trait.
 - **Patient teaching before discharge:** I would provide before discharge is to keep Brittany always hydrated, have her immunizations up to date as well as the flu vaccine, and to avoid strenuous exercise. We want her to avoid high altitudes, avoid being around sick people, and get her emotional support. I would also include for my patient to rest when they feel tired.
 - **Nutrition:** I would provide that Brittany needs to eat fruits and vegetables always. She can also eat grains, proteins (eggs, fish, meats, beans) and get plenty of calcium rich foods such as milk or cheese.

- **Signs & symptoms of crises:** I would teach my patient that signs would be acute pain, fever, severe abdominal pain, painful edematous hands and feet, arthralgia, leg ulcers, or swelling. Bone changes can occur as well as hepatomegaly, splenomegaly, and kidney abnormalities.
 - **Prevention of infection:** I would let my patient know to take antibiotics such as penicillin prophylaxis to prevent life threatening infections such as pneumonia. If their allergic to penicillin, then take erythromycin.
 - **Pain management:** I would teach patient to take analgesics for severe pain. They can put a warm compress on the painful area but NEVER APPLY A COLD COMPRESS as this can cause increase of sickling.
 - **Dehydration:** We want to provide electrolyte replacement and drink lots of fluids to prevent dehydration.
- 4) Reflecting on Brittany Long's case, were there any actions you would do differently? If so, what were these actions, and why would you do them differently?
- Something I would do differently is check the doctors order more frequently. I think this is very important to keep in mind by always checking because this is needed for our patient to get better and the only way, they can get better is to check what the doctor has in the EMR for them. Another action I would do differently is ask my patient what medications they're on currently to get a background of what their intaking.
- 5) Describe how you would apply the knowledge and skills that you obtained in Brittany Long's case to an actual patient care situation.
- From what I experienced with Brittany Long I would apply my skills to my patient by always having in mind to always introduce myself, accordingly. I will always assess my patients' vital signs thoroughly and check for allergies as the main important part of knowing how stable my patient is. As well as always ask for their pain score in the initial assessment to see what their pain scale is standing at. Communication is the way to go by asking our patients how they are feeling. This is how I would apply all critical thinking skills from what I obtained during this scenario.

vSim for Nursing | MATERNITY AND PEDIATRICS

Simulation time: 30:00 Mins

Brittany Long

Adm on 9/1/2021
Date of birth 12/10/2015
Age 5
Gender Female
Diagnosis Sick cell anemia



Your main opportunities for improvement

Remember to ask the parent or relative about allergies before administering drugs.

Basic view Detailed view

chest is moving equally.

- 0619 You attached the pulse oximeter. This was indicated by order.
- 0635 You measured the temperature in the ear. The temperature was 99 F (37.3 C).
- 0706 You attached the automatic noninvasive blood pressure (NIBP) measurement cuff. This will allow you to reassess the child continuously.
- 0758 You provided patient education. This is correct. It is important to use every opportunity to provide patient education.
- 0807 You provided education to the relative regarding the child's condition. This is correct. It is important to use every opportunity to provide education.
- 0841 You examined the child's legs. The right lower leg is warm to the touch. There is normal elasticity of the skin. She looks a bit pale.
- 0919 You offered the child a toy. This is reasonable.
- 1119 You phoned the provider in order to discuss the patient.
- 1311 You started a bolus of 250 mL of normal saline IV, given over 30 minutes. This was indicated by order.
- 2041 You gave the child a sip of juice. Comforting the child with a favorite drink is advisable.

0

0

1

87%
SCORE

Retry Continue

MacBook Pro

1 Suggested Reading

2 Pre-Simulation Quiz

3 vSim

4 Post-Simulation Quiz

5 Documentation Assignments

6 Guided Reflection Questions

Post-Simulation Quiz

Quiz Stats

Name:	Student 15 CSON	Quiz completed in:	16.25 mins
Date:	2021-9-2 Time: 19:23:21	Questions answered:	10
		Number correct:	10 (100%)

Answer Key

QUESTION 1: The nurse is caring for a patient with sickle cell anemia who is exhibiting... [more](#)

Your Response: Correct!

Correct Response: Assess pain frequently and administer medications routinely
Administer oxygen if saturations are less than 92% to promote adequate oxygenation
Administer hypotonic fluids intravenously to promote hemodilution

Explanation: The immediate priorities in the treatment of vaso-occlusive crisis are p... [more](#)

Ricci, S., Kyle, T., and Carman, S. Maternity and Pediatric Nursing, 4th Edition, p. 1713

QUESTION 2: The nurse is reviewing laboratory data on a patient with sickle cell ane... [more](#)

Your Response: Correct!

Correct Response: Decreased hemoglobin, increased platelet count, and greatly elevated reticulocyte count

Explanation: Laboratory data associated with sickle cell anemia includes decreased h...