

Scenario 4: Sickle Cell

- 1) What is the relationship between fluid and oxygen therapy in the treatment of sickle cell anemia?

Fluids help to keep the blood moving and the oxygen is to help make sure there is enough oxygen in the blood. When sickeling occurs, we could have tissue ischemia due to an obstruction so the fluids help keep everything moving and flushed out while the oxygen is to help decrease the risk of severe ischemia due to obstruction.

- 2) What complications might Brittany Long face if her symptoms are not recognized and treated in a timely manner?

Severe ischemia of the lower extremity which could lead to limb loss if not resolved. The obstruction must be cleared otherwise the complications will become too far gone to be able to save the limb. Also the obstruction could build up and cause problems elsewhere in the body. We must give her fluids and O2 to make sure the blood stays moving and the sickeling doesn't become too severe.

- 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: Normally, red blood cells are disc-shaped and flexible enough to move easily through the blood vessels. If you have sickle cell disease, your red blood cells are crescent- or "sickle"-shaped. These cells do not bend or move easily and can block blood flow to the rest of your body.

Education on prevention: Reduce the stressors that cause the crisis, no ice due to vasoconstriction, adequate fluids every day, allow for rest periods when needed, teach the early S/S of sickle cell crisis

Nutrition: Drink plenty of water and ensure adequate hydration, DASH diet, plenty of exercise
S/S: Redness, swelling, and pain are all S/S of sickeling crisis in the extremity, fatigue, fever, chest syndrome, jaundice

Pain management: Ibuprofen, Acetamenophen, heat for vasodilation, NO ICE, fluids fluids fluids, plenty of rest!!!!

- 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?

I believe I did everything in the simulation that I would have done in real life. I would've spoken with the doctor about the hypovolemia after seeing the labs and I would've administered pain medications after assessing the patient.

- 5) Describe how you would apply the knowledge and skills that you obtained in Brittany Long's case to an actual patient care situation.

I believe the simulation did a great job at showing how to handle the care of a sickle cell patient. I feel like I have a better understanding on how to prioritize care a patient going through this. This has helped me develop a better understanding of a sickle cell crisis as a whole. I think I need to do better at involving the family in the care because the parent knows their child best.

References:

U.S. Department of Health and Human Services. (n.d.). *What is sickle cell disease?* National Heart Lung and Blood Institute. Retrieved February 8, 2023, from <https://www.nhlbi.nih.gov/health/sickle-cell-disease>