

## Reflective Question Assignments

### Scenario 4: Sickle Cell

- 1) What is the relationship between fluid and oxygen therapy in the treatment of sickle cell anemia?
  - **Oxygen therapy and large amounts of oral or IV fluids are given in acute splenic sequestration crisis.**
  - **Oxygen supplementation is necessary because the morphology of the RBC structure doesn't allow for adequate O2 perfusion to the tissues.**
  - **And In this case the pt was dehydrated so the need for IV fluids was necessary to retain fluids within her body**
  - **In the case of vaso-occlusive crisis both oxygen and fluids where necessary**
- 2) What complications might Brittany Long face if her symptoms are not recognized and treated in a timely manner?
  - **Complications range from**
    - i. **Bone infarct**
    - ii. **Aseptic necrosis of the femoral head**
    - iii. **Ischemic stroke**
    - iv. **COPD**
    - v. **Acute chest syndrome**
    - vi. **Pulmonary HTN**
    - vii. **HF**
    - viii. **Retinopathy**
    - ix. **Nephropathy; chronic renal failure**
    - x. **Gall stones or abnormal liver function**
    - xi. **Skin ulcers**
    - xii. **Hemosiderosis**
    - xiii. **PRIAPISM**
- 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:** Congenital hemolytic disease resulting from a defective hemoglobin molecule (Hb S) that causes red blood cells (RBCs) to become sickle shaped  
This causes low oxygen perfusion throughout the body.
  - **Nutrition:** Pt needs a well-balanced diet
    - i. Intake of calcium-rich foods
    - ii. Adequate fluid intake
    - iii. Avoidance of alcohol

- **S/S of crisis:**
    - i. **Acute Chest syndrome**
      - Occurs in children between ages 8 months and 2 years
      - Causes lethargy and pallor
      - If untreated, progresses to hypovolemic shock and death
    - ii. **Aplastic Crisis** - Characterized by pallor, lethargy, sleepiness, dyspnea, markedly decreased bone marrow activity, RBC hemolysis and, possibly, coma
    - iii. **Priapism** - prolonged, painful penis erection
    - iv. **Acute Chest syndrome:** Sickling of RBCs in the vessels of the lungs and damages lung tissue and impaired oxygen exchange
    - v. **Painful Crisis:** most common crisis that happens periodically around the age of 1-2 years old
      - Characterized by severe abdominal, thoracic, muscle, or bone pain. Possible increased jaundice, dark urine and a low-grade fever
  - **Prevention of infection and dehydration:**
    - i. Encourage adequate fluid intake to prevent dehydration, which can increase blood viscosity
    - ii. meticulous wound care, good oral hygiene, and regular dental checkups to safeguard against infection
    - iii. signs and symptoms of infection and the need for prompt treatment, especially if temperature is 101° F (38.3° C) or greater
  - **Pain management:** Use of massage, yoga, transcutaneous electrical nerve stimulation, guided audiovisual relaxation, or virtual reality in addition to standard pharmacological treatment
    - i. If these nonpharmacological don't work - pt may need to be hospitalized for opioid therapy
- 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?
- There wasn't any action towards elevating the pts affected leg.
  - I would have offered Pedialyte instead of her favorite juice. Pedialyte would have helped with our dehydration status.
- 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 will apply the knowledge and skills that I attained from the Vsim to my future Sickle Cell pt
  - Pain management (opioid therapy) is vital for the pt to try and live a normal life.
  - During crisis moments the necessity of O2 therapy in conjunction with fluid IV therapy will help stabilize the pt.

- I would also try to emphasize the importance of good nutrition and infection prevention to these pt's.