Hepatic Sinusoidal Obstruction Syndrome in Patients Undergoing Hematopoietic Stem Cell Transplant

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**Key Points . . .**

- Hepatic sinusoidal obstruction syndrome (HSOS), also referred to as hepatic veno-occlusive disease, is a potentially life-threatening consequence of high-dose chemotherapy used in hematopoietic stem cell transplant that results in jaundice, weight gain, and painful hepatomegaly.
- HSOS can result in damage to the cardiovascular, pulmonary, renal, gastrointestinal, integumentary, and neurologic systems.
- Nurses need to understand the sequelae of hepatic damage and the rationale for current methods of preventing and treating these complications.
- Patients with HSOS require tremendous physical and psychosocial support.

**Hepatic Anatomy and Physiology**

The liver is a highly vascular organ that receives its blood supply from two sources: approximately 30% from the hepatic artery and 70% from the portal vein (Jakubik, Cockerham, Altmann, & Grossman, 2003). Blood is filtered through the sponge-like structure of the hepatic parenchyma before entering the hepatic vein and returning to the vena cava. The liver is responsible for a number of crucial physiologic functions (see Figure 1), and disruption of these functions produces many of the signs and symptoms associated with HSOS.

**Goal for CNE Enrollees**

To enhance nurses’ knowledge regarding hepatic sinusoidal obstruction syndrome (HSOS).

**Objectives for CNE Enrollees**

1. Define HSOS and identify risk factors for patients.
2. Recognize the symptoms of HSOS.
3. Identify nursing measures to support patients with HSOS.

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