Ribavirin is a common, community-acquired respiratory virus that causes acute respiratory tract infections (Avetisyan, Mattsson, Sparrelid, & Ljungman, 2009). RSV infections typically occur in the fall, winter, and spring, with the season lasting about four months (Centers for Disease Control and Prevention [CDC], 2013). RSV can affect individuals of all ages, and almost all children by the age of two years have been infected with RSV (CDC, 2013). In the general population, RSV causes mild upper respiratory infections. Typically, only a small percentage of individuals develop severe disease (CDC, 2013). Those at highest risk include premature infants and those with compromised immune systems (CDC, 2013). The virus can cause severe lower respiratory tract infections or pneumonia that is associated with significant morbidity and mortality in those who are immunocompromised (Avetisyan et al., 2009).

In the hematopoietic stem cell transplantation population, RSV can occur in 3.5%–35% of patients during RSV season (Avetisyan et al., 2009). Patients undergoing transplantation have impaired T-cell immunity, which increases their risk of acquiring RSV and also decreases their ability to clear the virus, leading to more severe infections and longer duration of infections (Shah & Chemaly, 2011). Risk factors for RSV in the transplantation population include male gender, allogeneic transplantation, myeloablative conditioning, cytomegalovirus seropositivity, lymphopenia, and those who have not yet engrafted (Hynicka & Ensor, 2012). RSV-related lower respiratory tract infections are associated with airway inflammation, necrosis, edema, and increased mucus production leading to pulmonary congestion and productive cough (Latchford & Shelton, 2003). RSV infections in this population also can cause delayed engraftment or graft failure (Hynicka & Ensor, 2012). Because of the nonspecific symptoms that occur with RSV, diagnosis can be difficult and often delayed. Diagnosis is established using laboratory testing, with viral culture being the gold standard for detection (Hynicka & Ensor, 2012).

Prevention

RSV is spread through large droplet aerosols (Hynicka & Ensor, 2012), and the virus can shed for up to 22 days, increasing the risk of transmission (Latchford & Shelton, 2003). Prevention includes avoiding exposure, with hand washing being the best way to minimize transmission to others (Hynicka & Ensor, 2012). Other prevention strategies include strict isolation policies and the use of prophylactic medications to prevent infections.