Abstract:

Major complications of port placement can include conversion to inpatient level of care, prolonged hospitalization, permanent adverse sequelae, and death. Minor complications include malfunction, infection, and dehiscence. The University of Colorado Division of Interventional Radiology (IR) retrospectively reviewed all port placements over a two-year period to determine the division’s complication rate and compare them to national recognized thresholds. CPT codes for port placement and removal from January 2, 2013 through December 31, 2014 were obtained from the electronic medical record. The medical record was then reviewed to determine the etiology for all port removals. Ports not placed at this institution were excluded from the review. A morbidity and mortality (M&M) conference was held involving residents, fellows, advanced practice providers and attending interventional radiologists to review specific cases and determine actionable items to reduce complication rates.

Over the two-year period, 842 ports were placed and 242 ports were removed. Of the 242 ports that were removed, 182 of the ports were placed at the University of Colorado. The infection rate over a two-year period was 3.2% with a 30-day infection rate of 1.3%. This is below the accepted threshold rate of 4% suggested by the Society of Interventional Radiology. The rate of wound dehiscence was 0.9% with a 30-day dehiscence rate of 0%. This is below the accepted threshold rate of 2%.

Variable patient skin disinfection by technologists was a potential source of infection in port placements. A standard protocol for prepping patients was outlined at the M&M conference and education was provided to all IR radiology technologists. The lead technologist then performed random audits during port placement procedures to document adherence to the standard protocol. It was also observed during our M&M conference that some of the ports that had dehisced were directly correlated with a locator protrusion on the surface of the port being directly underneath the incision. In an attempt to reduce this complication, dissection during placement will ensure locator protrusions were not beneath the incision.