To compare the incidence of early infection-related chest port removal in adults when placed in neutropenic versus nonneutropenic patient groups” Perez et al 92019).

Abstract:

Background: Patients who require long-term central venous access can present for port placement with depressed immune function as a result of their treatment or disease process. At present, there is no consensus regarding whether neutropenia at the time of port placement confers a higher risk for early infection-related port removal.

Purpose: To compare the incidence of early infection-related chest port removal in adults when placed in neutropenic versus nonneutropenic patient groups.

Materials and Methods: This retrospective cohort study examined 2580 port placements in 1081 men (41.9%) and 1499 women (58.1%) at a single tertiary medical center between June 2007 and July 2017. Mean patient age ± standard deviation was 56 years ± 14 (range, 18-91 years). The electronic medical record was used to identify neutropenia (absolute neutrophil count <1500 cells/mm3) at the time of port placement and incidence of infection-related port removal. Electronic medical record follow-up was conducted for 30 days following port placement. End points were infection-related port removal or death related to port infection within 30 days. Statistical analysis compared the neutropenic (n = 159) and nonneutropenic (n = 2421) patient groups by using a χ2 test for categorical data and a Student t test for continuous variables, with a Fisher exact test to compare incidence of port removal and death related to port infection. Results: Ports placed in patients with neutropenia had an infection-related removal rate of 3.8% (six of 159) versus 0.91% (22 of 2421) in patients without neutropenia (P = .003). Patients with neutropenia had a port infection-related death rate of 0.63% (one of 159) versus 0.12% (three of 2421) for patients without neutropenia (P = .22). Conclusion: Neutropenia in adults at the time of implantable subcutaneous chest port placement was associated with a higher risk for early infection-related port removal. There was no difference in the incidence of death related to port infection in neutropenic or nonneutropenic populations.
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