Introduction: In April 2009 we conducted observational studies of post-op dressing techniques used by residents and physicians. dressings were done in the early morning result in suboptimal drainage. After switching results with surgeons, a decision was made to let nurses do the primary and follow-up dressings, using an antimicrobial gauze that contains polyhexamethylene biguanide. The decision was to standardize dressing order form. The dressing would be affixed with a hypoallergenic self-adhesive fabric tape to prevent skin tears and blisters.

Objective: Standardize post-op dressing procedures by orthopedic nurses and compare surgical site infection rates after implementation.

Methods: In October 2008 antimicrobial gauze dressings replaced traditional gauze dressings in the post-op dressing kit used by all surgeons for resident and outpatient surgeries. Beginning in October 2009 the standardization program was developed and implemented. Nurses were trained in procedures to remove primary post-op dressings and to re-apply an antimicrobial gauze dressing. A train the trainer program was developed by the infection control manager and clinical nurse educators and included education sheets. Surgeons, residents and physician assistants were informed at monthly staff meetings during the implementation process.

Results: In FY2009, an evaluation of 8890 orthopedic surgeries for signs of infection, as defined by the CDC, revealed 28 infections with an overall rate of 0.4%. In the prior fiscal year there were 36 infections in 8848 cases with a rate of 0.41%. The overall infection rate was significantly reduced after the standardization of the dressing procedures by nursing staff.

Conclusions: The standardization of post-op dressing procedures provided a reduction in the surgical site infection rate by 24%. Reduced work of residents and physicians assisted in the early identification of surgical site infection and reduced exogenous contamination from suboptimal aseptic technique.

Discussion

The standardization of post-op dressing was a major undertaking at our facility. The first year focus was on getting the AMD Island dressing on post-op dressing kits, working with residents and physician assistants to identify typical post-op dressing techniques and to transition the responsibility to nursing and identify and photograph wound issues common in the orthopedic population. Skin tears, blisters, local reaction to antimicrobials and hematoma were some of the problems nurses might encounter. During FY08 we noticed an increase in post-op hematomas in total hip patients and a case/control study is underway to evaluate possible causes or risk factors. That is the only category between FY08-FY09 that increased significantly after the implementation of AMD Island dressing impregnated with 0.2-percent polyhexamethylene biguanide as an addendum to current topical antimicrobials. Wounds. 2007;19(7):173-182.

References