Preventing Surgical Site Infection

Terry Coggins, MSN, RN, WOCN, CWCN, Medical Education Manager, Smith & Nephew

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One of the biggest concerns in hospitals today is related to surgical site infections. According to the Centers for Disease Control (CDC), there are an estimated 780,000 operations every year that are complicated by surgical site infections. Surgical site infections increase the cost of care. For example, there are reports that infections resulting from coronary artery bypass graft surgery may increase the cost per patient by over $12,000. In one hospital in south Florida, the cost of a surgical site infection increased the cost of GI surgeries/orthopedic surgeries by over $11,000 per patient1.

There are also issues with surgical site infections related to clinical outcomes. Today, there are products that can help as part of an overall plan to reduce surgical site infections. In particular, there are wound dressings that can make a difference.

When choosing a wound dressing, consider:

1. ‘Is it bactericidal?’ Dressings are available that are bactericidal that can act quickly to kill bacteria and provide antimicrobial activity against a broad range of pathogens, including strains of MRSA.

2. Is the dressing silver-coated? The amount of available silver can influence the dressing’s potency. One study in 1992, found that the amount of silver needed to kill MRSA was greater than 60 parts/million2.

3. Does the dressing provide a sustained antimicrobial barrier? It is important that the dressing can be left on the wound for a longer period of time to provide an antimicrobial barrier, thereby reducing the risk of bacteria exposure.

One example where a silver dressing was used as part of plan to reduce surgical site infection is the work that was reported from St. Elizabeth's Medical Center and Mohawk Valley Heart Institute in Utica, NY, a cardiovascular surgery center that, in 2002-2003, was experiencing an increase in surgical site infections in sternal incisions3.

They implemented a bundle approach, which included using ACTICOAT™, a silver antimicrobial barrier dressing post-operatively, to reduce surgical site infection. Within the first year, the facility saw a 66 percent reduction in surgical site infections, and an estimated $250,000 cost savings in that year. They saw an 11 percent decrease in their length of stay. They did fewer cases that year, but saw an increase in profit because of a reduction in infections requiring treatment.

1. Paxton PM, Save with Silver—Hidden Savings of Post Operative Nanocrystalline Silver Dressings on Surgical Sites. Poster presentation at Clinical Symposium on Advances in Skin and Wound Care, 2009.
2. Maple PA, Hamilton-Miller JM, Brumfitt W. Comparison of the in-vitro activities of the topical antimicrobials azelaic acid, nitrofurazone, silver sulphadiazine and mupirocin against methicillin-resistant Staphylococcus aureus. *J Antimicrob Chemother.* 1992;29:661-668.
3. Cantrell, S. Inspiring infection-prevention success stories that you can accomplish. *Health Care Purchasing News*, March 2007.

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