Highly Effective Regimen for Decolonization of Methicillin-Resistant Staphylococcus aureus Carriers

Reference:

Scientific Literature Review

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Podiatric Relevance:
Methicillin-resistant staph aureus (MRSA) is a frequently isolated pathogen in skin and soft tissue infections and is responsible for significant morbidity. Previous studies have shown that attempts at decolonization can decrease the incidence of subsequent infection. The purpose of this study was to evaluate the efficacy of a standardized MRSA decolonization regimen and identify factors that might influence decolonization failure.

Methods:
A prospective cohort study was carried out from January 2002 to April 2007, involving 94 hospitalized patients with MRSA colonization or infection. Swab cultures were taken from the nose, throat, inguinal area, perineal area, rectum, vagina, wounds, and catheter insertion sites. The decolonization regimen then consisted of: intra-nasal mupirocin BID; oral rinsing with 0.2% CHG solution TID; and body washing with 4% CHG soap QD. Additionally, urine-colonized patients received cotrimoxazole 800/160mg BID for five days; GI-colonized patients received oral vancomycin 1g BID for five days; and vaginal-colonized patients received povidone-iodine ovula QD for five days. If decolonization failed, the course was repeated. If local therapy was still unsuccessful, systemic treatment using fusidic acid 500mg TID, and rifampin 450mg BID, for five days was initiated.

Results:
94 cases of MRSA were identified during the study. 40 cases were excluded due to death, non-compliance, contraindications, and sociomedical reasons. Consequently there were 54 patients successfully decolonized. 44 went on to long-term success, while 10 became recolonized. The most common colonization sites were the nose and throat. MRSA eradication was achieved after one treatment course in 46.7% of the subjects. Single body site colonization required significantly fewer courses, although throat colonization persisted for the longest period of time.

Conclusions:
Eradication of MRSA carriage may reduce the risk of infection and prevent cross-transmission. This study demonstrated that a regimen involving both topical and systemic agents is a highly effective method for patients who complete the full treatment course. Foot and ankle surgeons may want to consider decolonization in patients prior to surgery, especially for those who may be at high risk to be carriers.