Session: P-09. Antimicrobial Stewardship: Trends in Antimicrobial Prescribing

Background. A new therapeutic monitoring of vancomycin for serious methicillin-resistant Staphylococcus aureus infections was published in March 2020. The guideline recommends a change in monitoring from trough to AUC/MIC based to improve patient outcomes. The purpose of this study was to determine institutional uptake of vancomycin AUC monitoring in 1-year post guideline publication in hospitals across the US.

Methods. An electronic survey was created to assess vancomycin AUC monitoring practices and distributed to the American College of Clinical Pharmacy Infections Diseases Practice and Research Network (ACCP IDprn) and American Society of Health System Pharmacists (ASHP). Initial survey distribution (phase 1) occurred May-June 2020 and aimed to serve as baseline data. The survey was re-distributed (phase 2) to the ACCP IDprn and ASHP one year later, May-June 2021. Prior to re-distribution the survey was updated to assess the impact of COVID-19 on uptake. Results were analyzed and reported using descriptive statistics. Chi-Square tests were used to compare categorical data.

Results. A total of 202 responses to phase 1 and 138 responses to phase 2 were recorded. Significantly more respondents implemented AUC monitoring 1-year post guideline than at baseline (42.8% vs 29.8%, p= 0.013). In both phases, 57% of those who had not implemented AUC monitoring had plans to do so over the next year. Additionally, 46.2% phase 2 respondents reported COVID-19 impacted their ability to transition to AUC monitoring citing issues such as lack of time and inadequate resources. The most common AUC monitoring programs utilized at baseline and 1-year post guideline were purchased Bayesian software (38.3% vs. 35.6%) and home-made software (26.1% vs 23.7%). Perceived challenges to implementing AUC monitoring included cost, difficult use and integration.

Conclusion. Increased uptake of vancomycin AUC monitoring occurred from baseline to 1-year post guideline publication. However, less than half of hospitals implemented this recommendation. Although COVID-19 impacted a large portion respondents’ ability AUC monitoring majority plans to transition. The vancomycin AUC monitoring over the next year. AUC monitoring should be adapted by all hospitals to optimize vancomycin efficacy and safety.

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176. Topical Antibiotic and Antiseptic Use in the Operating Room: An Opportunity for Antimicrobial Stewardship?

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Background. Data suggest that topical antibiotic and antiseptic use in the operating room is common but not commonly monitored by antimicrobial stewardship programs. Although some data suggest a benefit in certain surgical procedures, the CDC and WHO advise against the routine use of topical antibiotics in surgery due to uncertainty and heterogeneity of the overall data.

Methods. We conducted a retrospective 28-day period prevalence study of topical antibiotic and antiseptic use during surgical procedures performed in the operating room by 6 surgical specialties at a tertiary care medical center. For the subset of patients undergoing orthopedic surgeries, we evaluated the types of topical antibiotics received and the rates of surgical site infections (SSI) and adverse drug events within 28 days of the procedure.

Results. Of 744 surgical procedures reviewed, topical antibiotics were used in 127 (17.1%), topical antiseptics in 71 (9.5%), and both in 18 (2.4%) (Table 1). Antiseptic use was higher in orthopedics relative to other surgical specialties while topical antibiotic use was higher in neurosurgery. Hand, vascular and plastics had distinguishably lower use. In the orthopedic subgroup, after exclusions, 218 procedures were evaluated. Topical antibiotics were used in 42 (19.2%). Topical antibiotic therapy was more likely to be administered if prosthetic material was implanted, the procedure was emergent, or if a Staphylococcus aureus infection was present. Vancomycin was the most commonly used topical antibiotic and powder was the most commonly used type of application. As shown in Table 2, SSI occurred more often when both topical antibiotics and antiseptics were applied; however, SSI events were relatively uncommon, and these were more likely to have infection present at the time of surgery. Adverse events were rare.

Conclusion. In our institution we noted significant variability in use of topical antibiotic and antiseptic therapy among surgical specialties as well as within the orthopedic surgical specialty. Although opportunities to standardize use/nonuse of these therapies exist, this may be challenging due to the uncertainty and heterogeneity of currently available data.

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Figure 1. Preliminary Survey via RedCap