Session: P-44. HAI: Surgical Site Infections

Background. Drug shortages directly impact patient care. Rates of drug shortages have declined except for antimicrobials, where shortage rates remain similar or increased year-over-year. In November 2018, a national ceftazolin shortage occurred driving health systems to implement a therapeutic interchange of ceftazolin for cephalaxin for post-operative antimicrobial prophylaxis. The objective of this study is to determine whetherSSI-rate changes following post-operative cephalaxin use in placed of ceftazolin.

Methods. This was a retrospective, observational cohort study of patients receiving post-operative antimicrobial prophylaxis at a community-based health system in Oregon and Washington between May 2018 – August 2019. Participants were divided into 3 periods for SSI-rate trend analysis: pre-shortage (May 2018 – October 2018), shortage (November 2018 – February 2019), and post-shortage (March 2019 – August 2019). The primary outcome wasSSI-rates between groups.

Results. There were 6,578 patients in total (3,840 ceftazolin vs. 358 cephalaxin). There were no significant differences in baseline characteristics of age, sex, body mass index (BMI), or hospital location. The rate of SSI pre-shortage and post-shortage-cefazolin groups was not statistically different (14 [0.5%] vs. 23 [0.8%]; p=0.16). The primary outcome of SSI in the shortage group who received cephalaxin was not statistically different (37 [0.6%] vs. 0 [0%]; p=0.07).

Conclusion. National drug shortages significantly impact patient care, often leading to seeking evidence-poor alternative medications. These results suggest cephalaxin may be an acceptable post-operative prophylaxis antimicrobial if ceftazolin is unavailable.

Disclosures. All Authors: No reported disclosures

813. Implementing a Nurse-driven Nasal Decolonization Intervention to Prevent Surgical Site Infections within the Veterans Health Administration

Stacey Hockett Sherlock, MA1; Cassie Gooden, MPH2; Erin C. Balkenende, MPH1; Kimberly Dukes, PhD3; Eli N. Perencevich, MD MS4; Heather Schacht Reisinger, PhD5; Marlin L. Schweizer, PhD1; VA Iowa City Health Care System and University of Iowa, Iowa City, Iowa; 6VA Iowa City Health Care System, Iowa City, IA; Iowa City VA Health Care System and University of Iowa, Iowa City, IA; 7University of Iowa, Iowa City, Iowa; 8University of Iowa Carver College of Medicine, Iowa City, Iowa

Session: P-44. HAI: Surgical Site Infections

Background. *Staphylococcus aureus* surgical site infection (SSI) is common and devastating clinically. Pre-operative decolonization is associated with reduced incidence. 6, has been variably adopted due to barriers implementing high-efficacy prevention bundles, including unintended non-compliance applying intra-nasal mupirocin by patients at home. Three Veterans Affairs (VA) facilities attempted to implement an alternate evidence-based SSI prevention program that included intranasal povidone-iodine used to pre-operative setting to reduce challenges in the patient burden steps and to overcome other mupirocin barriers. Our objective was to identify strategies used for successful implementation of intranasal povidone-iodine.

Methods. We conducted pre- and post-implementation semi-structured interviews and site visits at three VA hospitals. Participants included surgery and clinic staff (e.g., nurses, physicians, care managers), infection control staff, and administrative leadership. Interviews were audio recorded and transcribed. Our interdisciplinary team performed a deductive and inductive consensus-based analysis.

Results. Implementation of this SSI prevention process was successful when nurse champions drove the implementation. Qualitative interviews indicate that nurses each had a variety of strategies and messages variant on their audience. Nurse-driven facilitators included: key leadership buy-in and strategic decisions about timing and setting of implementation (i.e., start implementation in units with likely early adopters then when project is working its way into circles of the early detractors). The primary implementation barrier identified was lack of a champion. One site stated that in the absence of a champion, a mandate or top-down approach may be needed for implementation at their facility.

Conclusion. Nurse champions facilitated successful SSI prevention process implementation. Nurses used strategies and approaches dependent on their knowledge and understanding of the stakeholders and setting to obtain buy-in. Future implementation of new clinical practices should consider utilizing nurse champions to promote uptake.

Disclosures. 9Marin L. Schweizer, PhD, 3M (Grant/Research Support/PDI) (Grant/Research Support/PDI)

814. Successful Treatment of *Cutibacterium acnes* (CA) Prosthetic Device Infection (PDI) with Oral Linezolid and Rifampin (LR)

Ronald G. Nahass, MD1; Maulikat Esouqil, LPN2; Krystle Smith, RN1; Danielle Lay Hoon Andrea Seneca, MSN2; Kathleen H. Seneca, MSN1; Marin L. Schweizer, PhD2; VA Iowa City Health Care System and University of Iowa, Iowa City, Iowa; 3VA Iowa City Health Care System, Iowa City, IA; 4Iowa City VA Health Care System and University of Iowa, Iowa City, IA; 5University of Iowa, Iowa City, Iowa; 6University of Iowa Carver College of Medicine, Iowa City, Iowa

Session: P-44. HAI: Surgical Site Infections

Background. CA PDI is increasingly recognized. CA is felt to create a slimmer layer that makes infection more likely and treatment more difficult in this setting. Traditional management has included prosthesis device explantation (PDE), prolonged antibiotic treatment, and delayed reimplantation. Recent interest in the use of oral treatment regimens and single stage procedures with long duration antibiotic therapy led us to treat a series of patients with oral treatment and retained prostheses after debridement. We report those results.

Methods. Sequential patients with CA PDI treated with oral therapy were identified. All patients underwent debridement of the tissue, exchange of components and or reimplantation of the prosthetic device. Only patients with exchanges were included. PDE was excluded. MFC testing for CA isolates was obtained when possible. Initial treatment was recorded at time of surgery. LR was the treatment of choice unless toxicity developed. A minimum of a 3-month follow-up post treatment was required to be included. 6 and 12 month follow up were obtained for all patients but 1 at this time.

Results. 10 patients were treated (Table 1). Shoulder joint infections were most common. All patients were treated with LR. All completed a minimum of 42 days of treatment (Table 2). The medication was well tolerated. The most common adverse events were nausea. 9/10 patients with 12 month follow up had no evidence of relapse. 1/10 had no relapse at 3 months. Typical for CA infection laboratory markers for infection were not markedly elevated. Notably thrombocytopenia did not occur (Table 3).

Table 1. Distribution of Prosthetic Device Infections

| Prosthetic Device | Number of Patient |
|-------------------|------------------|
| Breast Implant    | 1                |
| Shoulder Implant  | 5                |
| Knee Implant      | 1                |
| Hip Implant       | 1                |
| Fracture fixation | 1                |

Table 2. Duration of Treatment

| Test | Mean | Range |
|------|------|-------|
| ESR Start (mm/hr) | 31.4 | 2-95 |
| ESR End (mm/hr) | 10.7 | 2-24 |
| CRP Start (mg/l) | 9.94 | 1.7-23 |
| CRP End (mg/l) | 6.12 | 1-35 |
| WBC Start (x 10^3/l) | 8.27 | 4.7-14.3 |
| WBC End (x 10^3/l) | 6.63 | 4.1-10.6 |
| Hgb Start (g/dl) | 14.48 | 8.3-16.2 |
| Hgb End (g/dl) | 12.94 | 10-15.5 |
| Plt Start (x 10^3) | 309 | 207-551 |
| Plt End (x 10^3) | 240 | 169-409 |

Conclusion. We demonstrated the ability to successfully treat 10/10 patients with CA PDI without explantation using prolonged oral treatment with LR after debridement. This combination should be considered a treatment option and explored further as a low cost, well tolerated, high value treatment approach to this difficult infection.

Disclosures. Ronald G. Nahass, MD, Abbvie (Grant/Research Support, Speaker’s Bureau); Abbvie (Grant/Research Support); Gilead (Grant/Research Support, Speaker’s Bureau) Merck (Grant/Research Support, Speaker’s Bureau) Kathleen H. Seneca, MSN, Abbvie (Research Grant or Support); Abbvie (Research Grant or Support); Gilead (Speaker’s Bureau)

815. Short-Course vs. Extended-Course Perioperative Antibiotic Prophylaxis in Patients Receiving Unilateral Primary Total Knee Arthroplasty

Ja Le Lim, BSc (Pharmacy)1; Daphne Tah Chieh Yi, BSc (Pharmacy)2; Sai Chee Hung, BSc (Pharmacy)3; Winnie Lee, MSc3; Lay Hoon Andrea Koa, PharmD1; Nicholas Eng Meng Yeo, MBBS, MRCS, MMed (Ortho), FRCS(ED), FAMS2; Andrew Hwee Chye Tan, MBBS, FRCS(ED) (Ortho)2; Shumin Jasmine Chung, M.B.B.S, BSc, MRCP; Singapore General Hospital, Singapore

Session: OFID 2021-8 (Suppl 1) - Abstracts