555. The Burden of Invasive Staphylococcus aureus Disease Among Native Americans on the Navajo Nation

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Background. Device-related infections account for a fourth of all HAIs. Healthcare artery infection pump (HAIP) devices are used to deliver chemotherapy directly into the hepatic artery. This device is used primarily in patients with colorectal cancer for the management of unresectable hepatic metastases. We describe the infection rate and evaluation of hospital-associated MRSA in newly placed HAIP devices.

Methods. In December 2018, a cluster of 3 MRSA cases was identified within 15–26 days of HAIP insertion. From January 1, 2017 to December 31, 2018, patients with culture proven SSIs within 30 days of HAIP placement were identified through the infection control database to establish baseline rates. Procedural denominator data were found by querying CPT procedure codes. EMR was reviewed to extract clinical characteristics. In response to the cluster, healthcare personnel (HCP) were screened for MRSA by PCR and environmental cultures performed. PFGE and whole-genome sequencing (WGS) were performed to compare isolates recovered in culture and SNP analysis performed using the BioNumerics software v7.6.

Results. In December 2018, 3/15 patients with HAIP procedures developed MRSA infections within 30 days of the procedures (post-op days: 15,16,26). The baseline 30 day SSI rate for 2017 to 2018 was 1.3% (2/160). No further infections were identified in the 76 procedures since the cluster.

Conclusion. WGS confirmed common source transmission between two newly placed HAIP although the definitive source could not be identified. Surveillance and interventions are recommended for all types of vascular access devices.

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