

| | | | | |
|---|----------------|---------------|---------------|--------------|
| Azole exposure within 90 days | 11 (19) | 10 (21) | 1 (9) | 0.367 |
| Chronic wounds | 48 (81) | 38 (79) | 10 (91) | 0.367 |
| Indwelling devices | 52 (88) | 44 (92) | 8 (73) | 0.080 |
| Vascular access* | 35 (59) | 30 (63) | 5 (45) | |
| Percutaneous endoscopic gastrostomy | 25 (42) | 22 (46) | 3 (36) | |
| Indwelling urinary catheter | 29 (49) | 26 (54) | 3 (36) | |
| Other | 16 (27) | 14 (29) | 2 (18) | |
| Tracheostomy within 30 days | 22 (37) | 18 (38) | 4 (36) | 0.944 |
| Mechanical ventilation within 30 days | 34 (58) | 29 (60) | 5 (45) | 0.365 |
| Abdominal surgery within 30 days | 8 (14) | 7 (15) | 1 (9) | 0.631 |
| Gastrointestinal tract leak/perforation | 8 (14) | 6 (13) | 2 (18) | 0.620 |
| C. auris characterization, n (%) | | | | |
| Specimen source | | | | |
| Axilla/groin | 41 (70) | 41 (85) | 0 | |
| Blood | 9 (15) | 0 | 9 (82) | |
| Wound | 4 (7) | 2 (4) | 2 (18) | |
| Respiratory | 4 (7) | 4 (8) | 0 | |
| Urine | 1 (2) | 1 (2) | 0 | |
| Testing Location | | | | |
| Acute care hospital | 36 (61) | 25 (52) | 11 (100) | 0.071 |
| Long-term acute care | 14 (24) | 14 (29) | 0 | |
| Skilled nursing facility | 4 (7) | 4 (8) | 0 | |
| Susceptibility available | | | | |
| Antifungal treatment | 11 (19) | 2 (4) | 9 (82) | <0.001 |
| Echinocandins | 10 (17) | 2 (100) | 8 (88) | |
| Azoles | 1 (2) | 0 | 1 (11) | |
| Treatment duration | | | | |
| 1 week | 1 (2) | 1 (2) | 0 | 0.187 |
| 2 weeks | 7 (12) | 1 (2) | 6 (55) | |
| >2 weeks | 3 (5) | 0 | 3 (27) | |
| 30-day mortality, n (%) | 10 (17) | 8 (17) | 2 (18) | 0.904 |

*Central venous catheter, midline, peripherally inserted central catheter

were treated with echinocandins (88%); among the colonized, two (4%) were treated with echinocandins but had persistent colonization. Thirty-day mortality was not significantly different among the two groups and was nearly 20%. **Conclusions:** In this large cohort study, a history of healthcare exposure, drug-resistant organisms, use of broad-spectrum antibiotics, indwelling devices, and chronic wounds were common risk factors among *C. auris* patients. Limiting the use of broad-spectrum antimicrobials and invasive devices, adherence to infection prevention and control practices, and interfacility transfer communication are important mitigating strategies to reduce the incidence and spread of *C. auris*.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s92-s93

doi:10.1017/ash.2024.234

Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: Emerging Pathogens

Clinical and Genomic Characteristics of *Candida auris* in Central Ohio: An Insight into Epidemiological Surveillance

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Background: *Candida auris* is an emerging threat to hospitalized patients and invasive disease is associated with high mortality. This study describes clinical and microbiological characteristics of nine patients identified with *C. auris* at Ohio State Wexner Medical Center discovered through active surveillance or clinical investigation and uses whole genome sequencing (WGS) to compare isolates. **Methods:** In November 2022, an active *C. auris* surveillance program was implemented to screen patients admitted to high-risk units (intensive care units and progressive care units). Bilateral axilla and groin swabs were obtained upon unit admission and, if positive, were submitted for *C. auris* polymerase chain reaction (PCR) with culture and sensitivity testing. Patients with a positive screening or clinical isolate from November 2022 to November 2023 underwent chart

Table 1. Clinical and Microbiological Characteristics of *C. auris* Isolates

| | Clinical Specimen | Screening Specimen |
|--|-------------------|--------------------|
| Total (N=9) | 4 | 5 |
| Sex, M | 4 (100%) | 5 (100%) |
| Median Age, years (range) | 66 (33-72) | 63 (48-71) |
| Site of <i>C. auris</i> | | |
| Blood | 2 | 0 |
| Respiratory | 2 | 1 |
| Urine | 3 | 0 |
| Axilla/Groin Screen | 1 | 5 |
| Multiple sites | 3 | 1 |
| Present on admission (<hospital day 4) | 2 (50%) | 4 (80%) |
| Admission origin | | |
| Hospital transfer | 1 | 1 |
| SNF | 1 | 1 |
| Long term acute care/acute rehab | 1 | 2 |
| Home | 1 | 1 |
| Travel Interstate | 1 | 0 |
| Travel Abroad | 0 | 0 |
| History of MDRO colonization | 4 (100%) | 2 (40%) |
| Indwelling Medical Device | 3 (75%) | 2 (40%) |
| Immunosuppressed | 3 (75%) | 1 (20%) |
| Antibiotic use in past month | 4 (100%) | 5 (100%) |
| Antifungal use in past month | 3 (50%) | 0 (0%) |
| Presence of chronic wound | 4 (100%) | 2 (40%) |
| Discharge status | | |
| alive | 1(25%) | 2 (40%) |
| deceased | 3 (75%) | 3 (60%) |
| Isolate Resistance | | |
| Fluconazole R | 4 | 4 |
| Echinocandin S | 4 | 4 |

review for clinical characteristics, microbiologic data, and index admission information. For each isolate, DNA was extracted and WGS was performed. Core single nucleotide polymorphism (SNP) variation identified from the sequence data was used to infer genetic relationships among the isolates. **Results:** Nine patients were identified between November 2022 and November 2023. The clinical and microbiological characteristics are summarized in Table 1. All patients were hospitalized at various acute care facilities across the state at least once in the preceding 12 months. *C. auris* was determined to be present on admission for 6 patients. For 5 of these patients, it was their first interaction with our healthcare system. Three patients were not in contact isolation for >3 days before *C. auris* was identified. Unit wide point-prevalence screening was completed in these cases and no evidence of transmission was found. WGS showed eight of the nine isolates were related with 28 or less core SNP differences between isolates (Figure 1). One isolate (8) was genetically distinct with >45000 core SNP differences. Five isolates were highly related with a range of 4-15 SNP differences. No temporal or spatial overlap at our institution was identified among these five patients. **Conclusions:** The active surveillance program identified several patients colonized with *C. auris* in addition to those found through clinical testing. Multiple risk factors for *C. auris* were identified with high patient mortality (67%). Majority of the isolates were closely related without association with a known outbreak or epidemiologic link, suggesting a possible diffuse common reservoir. Next steps with surveillance in acute care and long-term care facilities will be critical for early detection to halt transmission of this organism.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s93

doi:10.1017/ash.2024.235

