

Rare Case of Infective Endocarditis Cause by Candida Auris

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ABSTRACT

Out of 150 described candida species, 10% are known to cause infections in Humans. Candida albicans was the most common cause of invasive candidiasis but according to the CDC the total number of confirmed cases of candida Auris in the duration of (September 2020 -august 2021) total of 3043 in USA and become superbug and becomes emerging multidrug resistant infection.

Candida Auris was first described in a Japanese patient in 2009, after being isolated from external ear canal. This species is associated mostly with hospital environment, where it can survive on different surfaces for long periods. C. Auris has been associated with multiple outbreaks throughout the world. It is multidrug resistant and is considered as one of the most serious emerging pathogens of public health importance. Candida Auris infection incidence is significantly higher in the patients with primary or acquired immunosuppression. It can cause infection in all age groups with, most of reported cases isolating Candida Auris from blood and other deep-seated site of infection. We presented the case report of infective endocarditis caused by candida Arius and helps to provide more awareness that earlier intervention might reduce mortality and morbidity.

Keywords

Infective endocarditis, Cancer, Immunocompromised, Candida Auris.

Introduction

Infective endocarditis is the infection of surface of heart; it could be bacterial, viral, and fungal. Candida Auris is new emergent multidrug resistant endocarditis with high mortality rate. Candia Auris required specialized method for identification, and it is more common in patients with long-term acute facility care and on mechanical ventilators. As per CDC in 2020, total 30 cases of candida Auris reported in USA. We have the one of the attention-grabbing cases of patient with multiple co-morbid and stage 04 ovarian cancer, status post chemo and radiotherapy admitted with altered mental status, admission diagnosis of sepsis secondary to

urinary tract infection and later vast workup and ECHO showed valvular vegetation. To submitting this case, report to create more awareness and early diagnosis of candida Auris can bring the different outcome in patients.

Case Presentation

Our patient was a 51 years patient with past medical history of hypertension, diabetes, end stage renal disease on dialysis, seizure disorder, stage 4 ovarian cancer s/p TAH/BSO with chemotherapy and radiation therapy, chronic thromboembolic diseases/pIVC filter, CVA with left sided residual weakness, oropharyngeal dysphagia s/p PEG tube, presented to emergency room with lethargy since past 2 days. As per daughter, patient was febrile with maximum temperature of 100, unable to open eyes, minimally responsive, but was able to answer simple questions. Additional symptoms

include headache, body cramping and lower abdominal pain.

Patient was admitted with a probable diagnosis of sepsis secondary to urinary tract infection. Urine analysis on admission showed leukocyte esterase, white blood cells and occasional bacteria. The patient was empirically started on Vancomycin by level. Zosyn 2.25 g every 8 hrs. Given history of ESRD, patient was started on normal saline 30 ml/hr for maintenance of blood pressure in setting of sepsis. The patient was given single dose of linezolid and gentamycin as per last urine culture sensitivity. The patient was continued on Zosyn and vancomycin. Due to up trending white count, the patient was transitioned from Zosyn to gentamycin and cefepime for empiric coverage of meningitis.

Admission CT head without contrast showed increased curvilinear hyperdensity within the right MCA infarct territory. In order to better, evaluate this finding; MRI contrast was obtained which showed the curvilinear area as chronic hemosiderin deposition. Patient underwent dialysis and following dialysis became tachycardic. EKG showed sinus tachycardia without arrhythmia. Despite treatment patient remained tachycardic and was upgraded to step-down for the continued management.

In stepdown, patient was found to have a large right sided pleural effusion with atelectasis. Diagnostic thoracentesis revealed exudative fluid. US of lungs. Revealed aspiration PNA, started vancomycin. Gallium scan showed increased activity in the lower right abdomen. Started Tigecycline 50 mg for intra-abdominal infection. CT abdomen was done to rule out intra-abdominal infectious process. Hypercalcemia workup in the setting of malignancy was done. Endocrinology was consulted and recommended calcium dialysate on dialysis. Patient spiked fever of 100.4, blood culture was positive for *Candida auris*, started on caspofungin. Patient had a pathologic left femur fracture, and as per ortho patient was unstable for orthopedic procedure and the fracture was management conservatively by splinting. Patient's pancytopenia was worsening, heme onc was consulted and work up for DIC and HLH was done, ordered NK cell lab and trending fibrinogen. Pt's Hb trended down to < 7, pt was transfused 2 Units of blood. Pt's platelets trended down to 6, she was transfused 2 units platelets. Echo showed vegetation on the aortic valve and mass in right atrium, possibly thrombus vs vegetation attached to the right atrial catheter. Patient has worsening tachycardia, oral suctioning expressed bloody sputum. Patient was very lethargic, non-responsive to verbal and tactile stimulation. Patient underwent intubation, blood pressure dropped. To 74/53, started on pressors. Patient was transferred to ICU for further management

Patient was admitted to ICU under impression of hypoxic respiratory failure requiring mechanical ventilation secondary to aspiration pneumonia/ septic shock and infective endocarditis in the setting of *Candida auris* fungemia. Caspofungin and Tigecyclin

was started. Laboratory results showed marked thrombocytopenia and patient was noted to have thrombosis in bilateral internal jugular and femoral veins. Family requested for DNR and patient was soon taken off the ventilator and pronounced dead.

Discussion

First reported in 2009, *Candida Auris* has been associated with many nosocomial diseases and has become a serious global issue. *C. Auris* is an ovoid budding yeast that is rarely known to form hyphae or pseudo hyphae. The identification of this pathogen is specifically difficult due to the lack of reporting and lack of commercially available diagnostic methods. On Sabaraud's agar, *C. Auris* may produce smooth, white, and cream-colored colonies whereas, on CHROMagar, *C. Auris* may display a variety of colors ranging from pale to dark pink [1].

Retrospective evaluation of isolates showed the earliest known infection with *C. Auris* occurred in South Korea in 1996 followed by Pakistan in 2008 and India in 2009.

Over the last two decades, invasive Candidiasis is rampantly emerging in critically ill patients.

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