

## CANDIDA HAEMULONII : AN EMERGING PATHOGEN IN IMMUNOCOMPROMISED PATIENT SHOWING RESISTANCE TO AZOLES AND SUSCEPTIBLY TO ECHINOCANDINS

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### ABSTRACT

Emergence of a new species of non-*albicans Candida* species in Immunocompromised patient is a very alarming and life threatening trend. Accurate identification and prompt treatment in such patients is necessary to curtail mortality. *Candida haemulonii* as the name suggests is mostly isolated from blood culture. Susceptibility pattern of such isolates is important as most of them are not susceptible to the commonly used azole group of drugs rather they are susceptible to newer drugs like echinocandins. In such patient automated blood culture and susceptibility should be preferred over conventional blood culture so that early diagnosis and treatment can to some extent decrease the percentage of mortality.

**Key words:** Broad Ligament, Extrauterine Pregnancy, Ultrasonography.

### INTRODUCTION

*A Candida haemulonii* (syn. *Torulopsis haemulonii*) was originally described from a strain obtained from the gut of a blue striped grunt (*Haemulon scirus*) in 1962. Levarde et al reported the first clinical isolation of this microorganism from the blood of a patient in 1984.(1) Since then it has been reported worldwide in Korea between 2004-2006 in 5 university hospital, in 2007 in a maternity hospital in Kuwait and in 2010 in Brazil.(2-6) In India *Candida haemulonii* was first reported from Sir Ganga Ram in a three months old baby. (7) A case of fungemia due to *Candida haemulonii* has been reported in an immunocompromised patient admitted in Dr. RMLIMS ( Ram Manohar Lohia Institute of Medical Sciences) by Vitek 2 compact (bioMerieux, France).

### CASE REPORT

A 57 yrs female was admitted in the department of nephrology in Dr. RMLIMS in the month of September 2014 with complaints of progressive instability on walking for the past 3 months and loss of appetite. She was a known case of chronic kidney disease, diabetes mellitus and hypothyroidism.

On examination, pallor was present, pulse and BP were normal. Cardiovascular and respiratory system showed no abnormality. Romberg's sign was positive, lower back tenderness was present on central nervous examination.

After preliminary investigations, serum creatinine, potassium, sodium, and urea were found to be deranged.

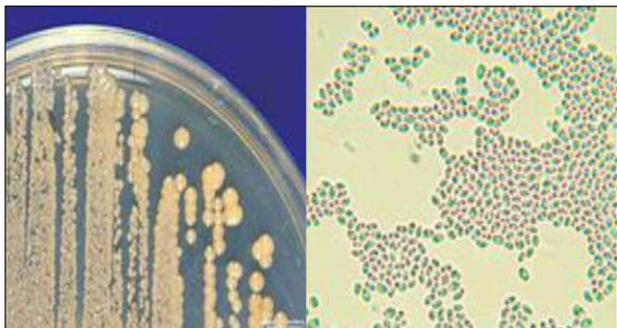


**Fig: Showing growth on Sabouruads Dextrose Agar Medium**

Ultrasonography of kidney ureter and bladder showed diffused thickened, irregular urinary bladder with hydronephrosis of left kidney and dilated left ureter. Patient was diagnosed to have advance renal failure and was advised dialysis. In between her scheduled dialysis she developed fever even when she was on antibiotic therapy ( Cefuroxime and Amoxicillin-clavulanic acid ). Her blood sample was sent for culture and sensitivity which was found to be positive after two days of incubation in VersaTrek automated system. Gram stain of direct smear showed budding yeast like cells and so

was also found on gram stain of smear made from sub-culture on Blood-agar. Germ tube test was negative.

On Sabourauds Dextrose Agar media white to cream coloured smooth glabrous yeast like colonies was present.



**Fig: Showing microscopic morphology of growth on Cornmeal Agar Medium.**

On Cornmeal Agar the microscopic morphology showed numerous ovoid to globose, budding yeast cells or blastoconidia, 3-5 x 3-6.5 microns and there was no pseudohyphae and chlamydo spores.

#### DISCUSSION

The isolate was identified as *Candida haemulonii* by Vitek 2 compact (bioMerieux, France). Antifungal sensitivity of the strain was also determined by Vitek 2 compact (bioMerieux, France) and was found to be sensitive to Voriconazole, Caspofungin and micafungin and was resistant to Fluconazole, Amphotericin B and Flucytosine. The patient was started on Caspofungin after which fever subsided and she completed five rounds of dialysis. Patient was discharged on request.

#### CONCLUSION

Emerging candida spp like *Candida haemulonii* was found to be resistant to Fluconazole, Amphotericin B, Flucytosine and sensitive to Echinocandin like Caspofungin.

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