‘I’m like a fungus; you can’t get rid of me’ or can you?
An Audit of Candidaemia Management Over One Year in an Irish Tertiary Care University Hospital

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BACKGROUND

Candidaemia is the most common manifestation of invasive candidiasis[1]. Considering its associated morbidity and mortality, we conducted a retrospective audit of cases diagnosed with candidaemia over the previous twelve months at our institute. The aim of our study was to assess compliance with local and international candidaemia management guidelines and to ascertain the clinical outcomes for patients

METHODS

A retrospective medical record review was conducted for all patients diagnosed with candidaemia from September 2019 to September 2020 inclusive. Local hospital guidelines and international guidelines for the Management of Candidiasis were used as the audit standard[2].

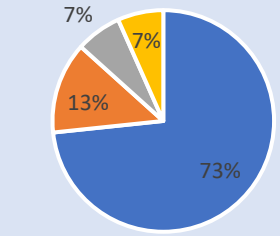
RESULTS

A total of 17 patients were diagnosed with candidaemia over the study period. However, only 15 patients were included in the analysis as two (2) patients died before *candida* was isolated from their blood cultures. Overall mortality within 1-month of diagnosis was 26.7% (n=4) and within 1-year was 46.7% (n=7).

Patient Demographics	
Gender	Male: 8 (53.3%), Female: 7 (46.7%)
Age	Median (IQR): 67 (50-77)
Acquisition Route	Community: 3(20%), Hospital: 12 (80%)
Candida Type	*glabrata*: 6 (40.0%), *albicans*: 7 (46.7%), *parapsilosis*: 1 (6.7%), mixed: 1 (6.7%)

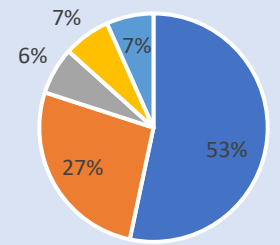
Source (n)	Source Control, n (%)	Comment (n)
Abdominal (7)	4 (57%)	IR intervention (3), surgical intervention (1), palliative (1), RIP (1), undrainable collection (1)
IV-Line (6)	6 (100%)	IV-line removed (6)
Genitourinary (2)	1 (50%)	Catheter removed (1), no catheter (1)

Early IV Treatment with an Echinocandin or Acceptable Alternative (n=15)



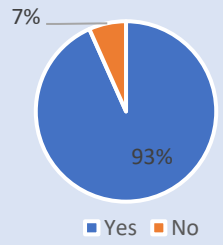
All patients were started on an appropriate antifungal agent within 48 hours, majority caspofungin except:
- Ambisome (1)*:* utilised in the critically-ill setting
- Anidulafungin (1)*:* used in a case of significant hepatic impairment
- Fluconazole (2)*:* patient had already been on same as an empiric escalation in the setting of abdominal sepsis in one patient and in another patient to treat the highly sensitive *Candida albicans*

Transition from Echinocandin to Fluconazole within 5-7 days where Appropriate (n=15)



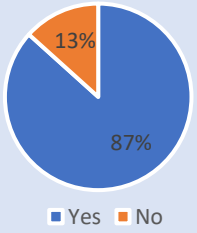
All patients received appropriate definitive antifungals, mostly fluconazole except:
- Caspofungin (4): *Candida glabrata* was the offending isolate (variable sensitivity profile to fluconazole)
- Ambisome (1): unsuitable clinically for de-escalation
- Anidulafungin (1): case of significant hepatic impairment – fluconazole is hepatotoxic
- None (1): Patient was made palliative

Follow-Up Cultures Every Day / Every Other Day (n=15)



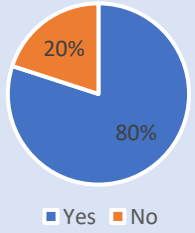
No follow-up cultures (1): patient was made palliative

Ophthalmological Exam & Echocardiogram within 1 week (n=15)



No ophthalmological exam / ECHO (2): 1 patient was palliated, 1 patient RIP before they were performed

Continue Treatment for 2 weeks after Negative Cultures & Resolution of Symptoms (n=15)



Treatment not continued (3): 2 patients RIP during treatment and 1 patient was made palliative

CONCLUSIONS

Overall, we found that compliance with local and international standards in the management of candidaemia at our institute was optimal, with most patients receiving appropriate treatment and therapeutic interventions. Overall mortality associated with the diagnosis of candidaemia on longitudinal follow-up was high, underscoring the seriousness of this diagnosis. Further interventions to promote effective management of this important condition will continued to be implemented in our institute in collaboration with our local clinical audit department and re-audited.

REFERENCES

1. Quindós, G. Epidemiology of candidaemia and invasive candidiasis. A changing face. *Revista Iberoamericana de Micologia* vol. 31 42–48 (2014).

2. Pappas, P. G. *et al.* Clinical Practice Guideline for the Management of Candidiasis: 2016 Update by the Infectious Diseases Society of America. (2015) doi:10.1093/cid/civ933.