

Outcomes and Epidemiology of Candidaemia in a Tertiary Care Hospital Over 12 Years Period: 2005-2017 A Retrospective Study

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BACKGROUND AND AIMS

Candida is an important cause of blood stream infections in health care settings with varying epidemiology^[1] and its incidence is rising globally with an estimated mortality rate of over 40%^[2].

We aimed to determine the outcomes and epidemiology of candidaemia in a 1,000 bed tertiary teaching hospital in England.

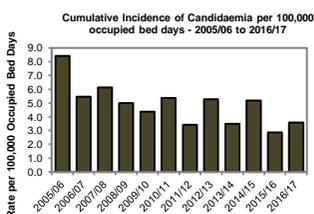
MATERIALS AND METHODS

All candidaemia episodes from January 2005 to October 2017 were retrospectively reviewed using laboratory data and patient case notes.



RESULTS

1. Incidence of Candidaemia

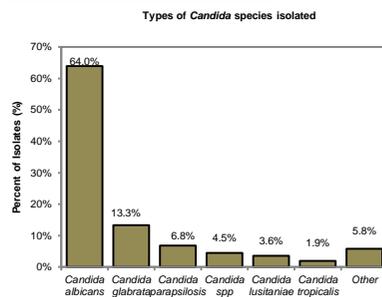


A total of 205 patient episodes of candidaemia were recorded with an overall incidence of 0.4/1000 admissions.



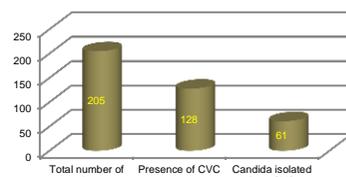
RESULTS

2. Distribution of Candida species



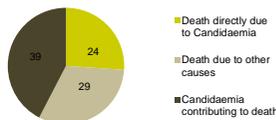
The commonest causes of candidaemia were *C. albicans*, *C. glabrata* and *C. parapsilosis* at 64%, 13.3% and 6.8% respectively.

3. Peripheral line associated Candidaemia



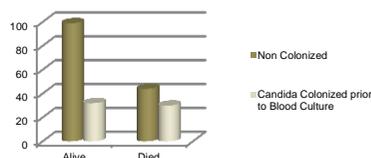
Indwelling vascular catheters was found to be an important risk factor.

4. Mortality



Overall mortality rate was 33.2%
57% of all deaths were attributed to candidaemia.

5. Candida isolated from other sites prior to Candidaemia and 28 Day Mortality



Prior colonization with candida were significantly associated with high 28-day mortality (p-Value= 0.02419).

DISCUSSION

The incidence of Candidaemia was 0.4/1000 admissions. This is lower than the incidence reported in Brazil (0.7/1000)^[1] and Australia (0.23/1000)^[5] but it is in keeping with the incidence reported from most European Countries (0.2-0.38/1000 admissions)^[3].

Just like in other studies^[4], *C. albicans* was the commonest cause of candidaemia (64%) with no significant difference in its isolation over the 12 year period.

An indwelling vascular catheter was present in 48% of candidaemia episodes making this the most important association of candidaemia. This association was considerably higher than that previously reported in England^[5].

There were two complications of candidaemia; infective endocarditis leading to death and bilateral endophthalmitis leading to bilateral total visual loss.

The overall mortality at 14 and 28 days was 29.3% and 36.1% respectively with a significant association with prior candida colonisation of the patient. There were however no differences in mortality rates among candida species.



CONCLUSIONS

The incidence of candidaemia at 0.4 per 10,000 in this series is similar to other European studies.

Complications of candidaemia were rare, but had Grave consequences.

These findings support IDSA and ESCMID recommendations that all candidaemia cases should have ophthalmic review.

Where candida colonization surveillance is possible, such as on ITU, it is good practice to carry out such surveillance so that identification of patients at high Risk of dying from candidaemia is done Early enough to instigate prompt treatment.

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DECLARATIONS

None of the authors have any conflicts of interest.