Spectrum and risk factors of early onset versus late onset neonatal candidemia from Pakistan

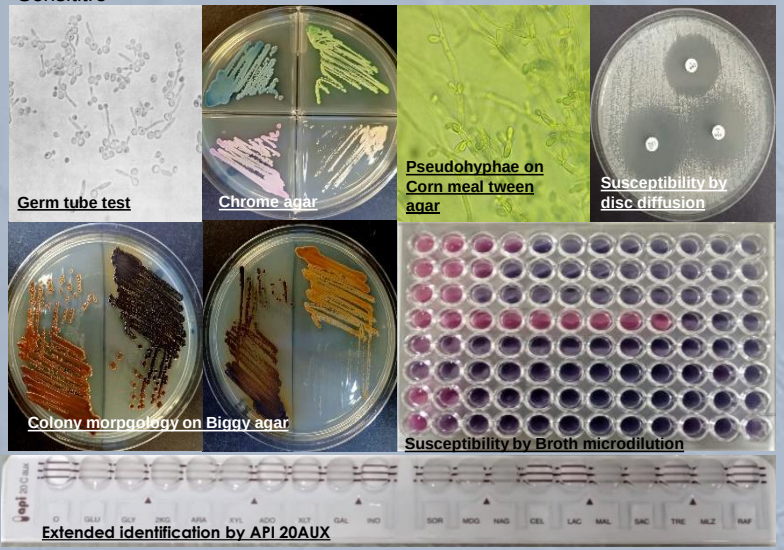
Salima Rattani[a], Joveria Farooqi[a], Ali Shabbir Hussain[b], Kauser Jabeen[a]
[a]Pathology and Laboratory Medicine, Microbiology section, [b]Department of Pediatrics & Child Health,The Aga Khan University, Karachi, Pakistan.

BACKGROUND

- Candidemia leads to high morbidity and mortality
- We studied the spectrum and risk factors of candidemia in neonates with early onset disease (EOD- age ≤3 days) or late onset disease (LOD- age >3 days).
- We also determined whether vaginal delivery is associated with candidemia in neonates with EOD.

METHODOLOGY

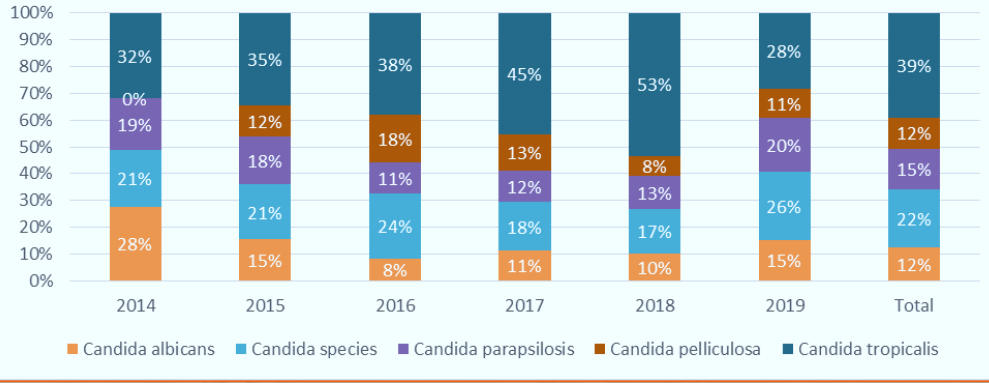
- A case control study @ Aga Khan University, Karachi, Pakistan.
- Cases (neonates with EOD) and controls (neonates with LOD)
- Study was conducted after obtaining exemption from the ethical review committee.
- Species identification → phenotypic characteristics
- Antifungal susceptibility testing → Disc diffusion & Broth microdilution by Sensititre



RESULTS

- A total of 669 neonates with IC were identified, out of these 162 neonates had EOD while 507 had LOD.
- Mean age of neonates with EOD and LOD was 1.7 and 12.2 days respectively.
- **Chart 1** shows the year wise distribution and frequency of different C. species.
- Subgroup analysis of patients whose clinical details were available showed;
  - LOD in neonates was more likely to occur in male patients (COR 2.5, 95% CI 0.6-9.9) was and associated with use of carbapenems (COR 5.1, 95% CI 1.4-17.8).
  - EOD was more likely in patients delivered via vaginal delivery (COR 11.3, 95% CI 2.6-48.5)

Chart 1: Year wise distribution of Candida species in neonates with inavasive disease from 2014-2019



CONCLUSION

- The trends for isolation of C. species in neonates showed a trend with C. tropicalis being more common C. species during the recent years.
- With the infrequent isolation of C. glabrata and C. krusei among other Candida species in this study, fluconazole may be considered a good empiric choice for neonates with suspected fungal sepsis.