Garima Kapoor
Saurabh Saigal
Karnika Saigal

Why candidemia occurs early: a comment on “incidence, characteristics and outcome of ICU-acquired candidemia in India”

Accepted: 28 December 2014
Published online: 21 January 2015
© Springer-Verlag Berlin Heidelberg and ESICM 2015

A response to these comments can be found at doi:[10.1007/s00134-015-3652-1](https://doi.org/10.1007/s00134-015-3652-1).

Dear Editor,
I read the extremely well-written article by Chakrabarti et al. about the incidence of candidemia in critically ill Indian intensive care unit (ICU) patients [1]. The study highlights the high burden of candidemia in Indian ICUs. The patients at admission are at high risk of candidemia despite less severity of illness and, unlike in the West, the most common species is *Candida tropicalis* [1–3].

These 27 Indian tertiary care hospitals are referral centers and a lot of these patients reach there after visiting private nursing homes or district hospitals. There is currently no functional national antibiotic policy to contain antimicrobial resistance in India. The policy published in 2011 has been put on hold because of the non-implementability of major recommendations [4]. There is no restriction on over the counter (OTC) dispensing of antibiotics without prescription. The real situation is that once the patients reach these nursing homes they are given carbapenems (now colistin and tigecycline are also being given), but still antifungals are

not used in these settings [4]. One of the reasons for the high incidence of *Candida* infections in the study by Chakrabarti et al. [1] could be due to use of broad-spectrum antibiotics (92.3 %) in these patients with 43 % of these patients on carbapenems.

One very controversial message being given by this study is that candidemia occurs early and that too with less physiologic severity of illness [1]. This will in fact trigger intensivists working at nursing homes and district hospitals who are presently prescribing broad-spectrum antibiotics only, to start prescribing antifungals also. This will lead to rampant use of antifungals and will in turn increase antifungal resistance [5]. These are serious matters which are to be addressed.

The current scenario in Indian settings is that 80 % of ICUs are in corporate (private) ownership and 20 % are in government ownership. Here I would like to say that the cost of treatment is borne by the patient's family and not by government as is the case with the National Health Service (NHS) in the UK. The cost of echinocandin is US\$10 as compared to US\$3 for amphotericin B; pharma companies report that the incidence of renal failure is high with amphotericin B and most importantly they focus on *C. glabrata* and *C. krusei* species. One very positive message given by this study is that *C. tropicalis* is the most common species which is sensitive to amphotericin B, so we should be focussing on giving amphotericin B rather than echinocandins [1].

The important take-home message for intensivists should not be to start antifungals in each and every patient and most importantly to restrict the use of broad-spectrum antibiotics. The first step in this direction has been taken by Ghafur et al. on the basis of the Chennai Declaration

which suggests monitoring the use of high-end carbapenems, colistin, tigecycline, and antifungals [4]. A clear message from this study is the need for strict antibiotic and antifungal stewardship in Indian ICUs.

Conflicts of interest None.

References

1. Chakrabarti A, Sood P, Rudramurthy SM et al (2014) Incidence, characteristics and outcome of ICU-acquired candidemia in India. *Intensive Care Med*. doi:[10.1007/s00134-014-3603-2](https://doi.org/10.1007/s00134-014-3603-2)
2. Lortholary O, Renaudat C, Sitbon K et al (2014) Worrisome trends in incidence and mortality of candidemia in intensive care units (Paris area, 2002–2010). *Intensive Care Med* 40(9):1303–1312
3. Colombo AL, Guimaraes T, Sukienik T et al (2014) Prognostic factors and historical trends in the epidemiology of candidemia in critically ill patients: an analysis of five multicenter studies sequentially conducted over a 9-year period. *Intensive Care Med* 40(10):1489–1498
4. Ghafur A, Mathai D, Muruganathan A et al (2012) The Chennai Declaration Recommendations of a roadmap—to tackle the challenge of antimicrobial resistance—a joint meeting of medical societies of India. *Indian J Cancer* 49(4):71–81
5. Maubon D, Garnaud C, Calandra T et al (2014) Resistance of *Candida* spp. to antifungal drugs in the ICU: where are we now? *Intensive Care Med* 40(9):1241–1255

G. Kapoor (✉)
Department of Microbiology, Gandhi Medical College, Bhopal, India
e-mail: garima.kapoor.001@gmail.com
Tel.: +91 -8251978489

S. Saigal
Department of Trauma & Emergency, AIIMS, Bhopal, India

K. Saigal
Department of Microbiology, AIIMS, New Delhi, India