Candida guilliermondii fungemia. *To treat or not to treat*

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Fungal infection in premature infants is not rare.[1] By virtue of their size and increased exposure to interventional methods of care including indwelling lines and catheters, the premature infants in an intensive care unit are prone to develop candidal fungemia. *Candida guilliermondii* (*C. guilliermondii*) is among the one of the rare species of candida causing fungemia.[2] However, the management of this rare fungemia has been viewed controversially. The risk of not treating a true infection[3,4] versus treating a pseudofungemia[5,6] with toxic antifungal drugs has been put forward as the arguments. To further highlight on the contradiction in treatment associated with *C. guilliermondii,* the following case is presented.

The infant was born at 28-weeks of gestation with birth weight of 1030 grams. She developed signs of respiratory distress for which she required intubation and mechanical ventilation. A septic work up was carried out and she was started on ampicillin and gentamicin. On the fourth day, she discovered to have a murmur diagnosed as patent ductus arteriosus. The admission blood culture was negative. The infant had a very stormy course. She had several episodes of non-specific symptoms requiring appropriate work-up including several blood cultures. Out of 7 blood cultures, 3 were positive for *C. guilliermondii*. The first positive blood culture report (day 35) was treated with central line removal. No antifungal treatment was started keeping in view of the relatively rare and uncommon specie of candida with high suspicion of pseudofungemia.[5,6] In addition, when we got the positive culture report the infant at that point was asymptomatic; thus, we opted to repeat the culture which later was reported to be negative (day 42) favoring our decision. However, the very next day the infant developed non-specific symptoms that triggered us to obtain another culture, which later was noted to be positive (third culture). Again, the treatment was deferred. The infant remained stable thereafter and was discharged home on 71 day of life with the discharge weight of 2090 grams.

We realized on the fact that it was not safe or easy to defer treatment for these positive cultures[3,4] but as the infant showed clinical improvement the next day of obtaining the cultures without antibiotic we entertained positive cultures as pseudofungemia, as reported earlier in the medical literature.[5,6] At this juncture, we would like to highlight on the practice of liberal use of antibiotics in the intensive care units, which has shown to be not free from complications. The empiric use of antibiotic has resulted in upsurge of multi-resistant organism. In addition, one also has to take into consideration the risk and complication associated with antifungal therapeutic agents. Thus, not to treat positive fungal blood cultures with improvement in the clinical condition was justified.

Although, we succeeded in our approach and the infant was discharged home at 71 days of life in healthy condition without any major sequelae but few questions remain to be answered: how could we differentiate between the real infection with *Candida species* and pseudofungemias? What are the alternatives? Any novel diagnostic tool. Further, research work should be carried out to answer these queries.

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