According to results of the molecular methods, we thought that a C. albicans outbreak had occurred in the neonatal pediatric unit, due to contamination of TPN solution” Guducuoğlu et al (2016).

Abstract:

BACKGROUND: The most frequently isolated fungi in patients using TPN belongs to the Candida genus. Various infections including venous catheter infections, fungemia, endocarditis and ophthalmitis may be encountered.

OBJECTIVE: Upon growth of Candida in the blood cultures from the pediatric (neonatal) unit of our hospital, a surveillance was performed in this unit and involving the health care workers. Clonal relationships of the isolates were investigated with molecular tests.

METHODS: Blood samples obtained from the patients in pediatric neonatal unit were studied with automatized blood culture. Yeast isolates from environmental surveillance cultures (TPN solutions, hands of healthcare personnel, etc) and patients were identified as C. albicans with conventional methods and ID 32 C and ATB TM Fungus 3 (Biomerieux, France) kits. Clonal similarity was determined by using AP-PCR as initial method and we have also
typified all strains by the method of REP-PCR (diversilab system, bioMérieux). Finally; Pulsed Field Gel Electrophoresis (PFGE) was used for confirmation.

RESULTS: C. albicans was isolated in blood cultures of seven patients. Similar antifungal susceptibility patterns were observed in all isolates. AP-PCR and REP-PCR showed that the C. albicans isolates grown in the TPN solution and from the patients’ blood cultures were clonally same strains. PFGE analysis further confirmed this clonality.

CONCLUSION: According to results of the molecular methods, we thought that a C. albicans outbreak had occurred in the neonatal pediatric unit, due to contamination of TPN solution.

Full Text Reference:


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