

## عنوان مقاله:

Fungal Colonization among Iranian Infants Hospitalized in the Neonatal Intensive Care Unit: Occurrence Rate, Risk Factors and Health Outcome

## محل انتشار:

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## خلاصه مقاله:

Background: Fungal infections with high morbidity and mortality in neonatal intensive care unit are usually preceded by colonization. We aimed to investigate the prevalence of fungal colonization, determine the risk factors and health outcome such as any change in the patient's improvement in hospitalized infants of Neonatal Intensive Care Unit (NICU). Materials and Methods: This prospective cohort study was conducted on all newborns who were hospitalized in Namazee NICU which is the largest neonatal center in Southwestern Iran during the six-month period from January to July 2018. The eye, urine, perineum, nose, throat, umbilicus and blood were sampled within 72 hours following NICU admission and repeated one week later. Each newborn with at least one positive fungi culture from surveillance site was defined as fungal colonization. All newborns were categorized into two groups based on results of fungal colonization; they were evaluated for baseline perinatal and neonatal characteristic data, probable risk factors (such as prior antibiotics, presence of an endotracheal tube and neonatal disease) and health outcomes (cure, improvement or death). Statistical analysis was done using SPSS software (version 22.0). Results: From a total of 105 (37 girls, 68 boys) hospitalized newborns in NICU, forty-eight (45.7%) of them were colonized by *Candida* spp. which was the only fungus isolated from the cultures. There were significant differences for the level of hemoglobin ( $p=0.04$ ) and cardiac diseases ( $p=0.04$ ) between the two groups of fungal colonization and non-colonized newborns. One-third of the newborns that had fungal colonization passed away vs. one-tenth without fungal colonization. Conclusion Based on the results, there was a 45.7% rate of fungal colonization in hospitalized newborns in NICU. Hemoglobin level and cardiac diseases were a risk factor for fungal colonization in these patients. The rate of death was approximately three-fold in hospitalized infants with fungal colonization vs. non-fungi infected.

## کلمات کلیدی:

Colonization, Fungi, Newborn, Neonatal Intensive Care Unit

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