



THE ETIOLOGY OF HEALTHCARE-ASSOCIATED INFECTIONS IN NEWBORNS

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Introduction. Healthcare-associated infections (HAI) represent a major health problem of modern medicine. These are the leading cause of morbidity worldwide, as well as being a challenge for the healthcare system and the entire medical community. The foremost issue regarding current human pathology is the healthcare-associated infections in newborns, which play a specific role by exhibiting high incidence and serious outcomes, thereby contributing to a sudden increase in the treatment costs, as well as due to their related economic, moral and social impact. HAI are frequent complications in neonatal intensive care units with varying risk factors and bacteriological profile. Healthcare-associated infections in newborns have become one of the major problems of contemporary health assistance requiring the implementation of specific strategies and objectives for prevention and management.

Material and methods. This present study is a review of the relevant literature data, published in online medical databases such as Medline (PubMed) and Scopus, Google Scholar, WHO websites and CDC, which refer to healthcare-associated infections in newborns.

Results. Health care-associated infections are infections that occur while receiving health care, developed in a hospital or other health care facility that first appear 48 hours or more after hospital admission, or within 30 days after having received health care. The literature review showed that the conditionally pathogenic gram-negative and gram-positive bacteria play an important role in the etiology of non-specific infections. The etiological structure of healthcare-associated infections and the particularities of the causative agents depend on the type of healthcare institution, the age of the patients, the modern instrumental methods of diagnosis and treatment, as well as other factors. The microorganisms isolated from healthcare-associated infections in newborns were as following: *Escherichia coli*, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Staphylococcus aureus*, *Enterococcus cloacae*, *Staphylococcus epidermidis*, *Klebsiella pneumoniae* and *Proteus mirabilis*. At the same time, the literature data revealed a higher incidence of mono-infections compared to mixed infections. The most common reported cases of healthcare-associated infections involved respiratory tract infections (60.3%), followed by eye infections (15.5%), skin and soft-tissue infections (8.6%), bloodstream infections (6.8%), gastrointestinal tract infections (5.1%) and bone infections (3.4%), as well.

Conclusions. Healthcare-associated infections are an ongoing issue for clinical medicine which often lead to life-threatening conditions. A nonspecific infection is directly associated with the immune status, including the naturally-acquired factors in newborns. Effective prevention and treatment of in healthcare-associated infections the require an understanding of the distribution of pathogens, the various patient-related risk factors for these infections, and the roles of medications and invasive procedures in predisposing to their occurrence.