

HEALTHCARE-ASSOCIATED INFECTIONS POST-TRANSPLANT IN ONCOLOGICAL PATIENTS

Cara Olga^{1,2}

¹*Nicolae Testemițanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

²Oncology Institute, Chisinau, Republic of Moldova

Introduction. Healthcare-associated infections (HAI) in oncological patients represent a frequent health problem, but also an economic burden for the hospital, the state and the patient's family. Organ or stem cell transplantation is an essential procedure in the treatment of blood cancers (leukemia, lymphoma) and other types of tumors, replacing diseased bone marrow or bone marrow destroyed by intensive chemotherapy with healthy cells. Critically ill cancer patients are a subpopulation more vulnerable to HAI, they present additional non-modifiable risk factors.

Materials and methods. The research is a review of the specialized literature based on searching for articles in databases (PubMed, Google Scholar, Research Gate) using as keywords “cancer treatments”, “healthcare-associated infections”, “nosocomial infections AND transplant”, “post-transplant hospital-acquired infections”, “stem cells AND immunosuppression”, “cancer AND hospital-acquired infections”. No filter was applied, but articles published in the last ten years were preferentially selected to perform this narrative analysis.

Results. WHO considers that approximately 40% of deaths caused by cancer could be avoided, while emphasizing “prevention of HAI” as an essential component of all cancer care protocols. In the case of post-transplant oncology patients, almost all microorganisms can cause HAI, including colonizing and normal microbiota. The most frequently reported pathogens are *Escherichia coli*, *Pseudomonas aeruginosa*, *Klebsiella* spp., *Staphylococcus* spp. and *Streptococcus* spp. Bloodstream infections are among the most common, due to the devices that are constantly inserted. Scientific studies have concluded that against the background of chemotherapy, immunosuppression and stem cell transplantation, CAUTI, urinary tract infections, digestive system infections, surgical site infections, etc. are also associated. It has been estimated that 20-40% of all HAI is due to contaminated hands of healthcare workers, 20% is potentially due to contaminated environment. Several studies have shown that microorganisms detected as pathogens triggering HAI in cancer patients are resistant to antibiotics.

Conclusions. In order to prevent post-transplant HAI in cancer patients, it is necessary to apply multiple preventive and educational actions undertaken by a multidisciplinary team to obtain the best care for vulnerable patients and minimize additional costs for the health system.

Keywords: healthcare-associated infections, transplant, cancer, patient, oncology.