

## Infection Profile of Patients Undergoing Autologous Bone Marrow Transplantation in Tabriz, Iran

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**Abstract :** Background and Objective: Hematopoietic stem cell transplantation (HSCT) has been widely used for treating oncological and hematological diseases. Although HSCT has helped to improve patient survival, the risk of developing an infection during hospitalization is an important cause of morbidity and mortality. This study aimed to analyze the infection profile during hospitalization and the associated risk factors among patients undergoing autologous HSCT at the University Hospital, Shahid Ghazi Tabatabaei Hospital, Tabriz, Iran. Subjects and Methods: This was a cross-sectional study on patients undergoing autologous HSCT at a public university hospital. Methods: Patients with febrile neutropenia between 2015 and 2018 were retrospectively evaluated regarding their infection profile and associated risk factors. This survey included: bacterial culture and blood culture on specific media. Results: Infection occurred in 57.2% of 56 patients with febrile neutropenia. The main source of infection was the central venous catheter (25.9%). Infection was chiefly due to Gram-positive bacteria, although Gram-negative-related infections were more severe and caused a higher death rate. Sex, age, skin color, nutritional status, and underlying disease were not associated with the development of infection. Patients with severe mucositis (Grades III and IV) had a higher infection rate ( $P < 0.001$ ). Patients who developed pulmonary complications during hospitalization had higher infection rates ( $P = 0.002$ ). Infection was the main cause of death (57.1%) in the study sample. Conclusion: Strategies aimed at reducing infection-related mortality rates among patients undergoing autologous HSCT are necessary.

**Keywords :** hematopoietic stem cell, autologous bone marrow transplantation, infection profile, tabriz, Iran

**Conference Title :** ICH 2023 : International Conference on Hematology

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** January 30-31, 2023