allied academies

6th Global Summit on Allergy and Immunology

6th International Conference on Clinical Hematology & Transfusion Medicine

4th World Congress on Infection Prevention and Control

2nd European Congress on Virology and Immunology

April 29, 2022 | Webinar

Immunohematological dilemma due to daratumumab!

Ruhi Mehra

Kokilaben Dhirubhai Ambani Hospital, India

CD38 is a disulfide-linked molecule present on red blood cells (RBCs) and daratumumab; an anti-CD38 monoclonal antibody is a novel agent for treating multiple myeloma patients. Now-a-days it is also being explored to treat many other oncology conditions. The presence of daratumumab in the sera can interfere with immunohematological testing performed as a part of the pretransfusion testing protocols. Interferences can lead to a variety of challenging situations like – blood group discrepancy, mimicking high titre low avidity antibody (HTLA), incompatibility issues during compatibility testing, demonstrating auto/allo – antibody like pattern etc.

We would like to present here a case of relapsed multiple myeloma post-autologous hematopoietic stem cell transplant who presented to our department with ABO blood group discrepancy and a positive antibody screen due to the interference of his past treatment with daratumumab. This case further emphasizes the fact that effective communication between blood transfusion services and oncology departments are crucial in the timely resolution of daratumumab interferences even after its course has been completed.

Received date: March 2, 2022; **Accepted date:** March 5, 2022; **Published date:** May 10, 2022.

allied academies

6th Global Summit on Allergy and Immunology

6th International Conference on Clinical Hematology & Transfusion Medicine

4th World Congress on Infection Prevention and Control

2nd European Congress on Virology and Immunology

April 29, 2022 | Webinar

Adigun Musibau Adeleke Nitric oxide: A key player in immune system

Adigun Musibau Adeleke

The Federal Polytechnic Offa, Nigeria

The immune system is a network of biological processes that protects an organism from diseases. It detects and responds to a wide variety of pathogens, from viruses to parasitic worms, as well as cancer cells and objects such as wood splinters, distinguishing them from the organisms own healthy tissue. Nitric Oxide (NO) is important as a toxic defence molecule against infectious organisms. NO is an intercellular messenger that has been recognized as one of the most versatile players in the immune system which regulates the functional activity, growth and death of many immune and inflammatory cell types including macrophages, T lymphocytes, antigen-presenting cells, mast cells, neutrophils and NK cells. NO is a readily diffusible gas that has been established as a universal messenger, capable of mediating cell-cell communication throughout the body. It is involved in the pathogenesis and control of tumors, infectious diseases, chronic degenerative diseases and autoimmune processes. Due to NO variety of reaction partners (DNA), proteins, prosthetic groups, low–molecular weight thiols, reactive oxygen intermediates), its widespread production (by three different NO synthases (NOS) and the fact that its activity is mainly modified by its concentration, NO continues to surprise and perplex immunologists. Therefore, there is no simple, uniform pattern of the function of NO in the immune system.

Received date: March 02, 2022; **Accepted date:** March 04, 2022; **Published date:** May 10, 2022.

6th Global Summit on Allergy and Immunology
6th International Conference on Clinical Hematology & Transfusion Medicine
4th World Congress on Infection Prevention and Control
2nd European Congress on Virology and Immunology
April 29, 2022 | Webinar

Prevalence of blood culture contamination in the collection of hematopoietic progenitor cells and blood components

Yair Omar Chavez Estrada*, Dalila Marisol Alvarado Navarro, Ana Karen Hernandez Navarro, Berenic Ake Uc, Víctor Gomez Lopez, Rosario Salazar Riojas, David Gomez Almaguer and Cesar Homero Gutierrez Aguirre
Mexican Society of Cell Therapy and Bone Marrow Transplantation, Mexico

One of the risks present in patients receiving transfusion of hemocomponents or hematopoietic progenitor cells (HPC) during autologous or allogeneic transplantation is the administration of a product with bacterial contamination, increasing the possibility of an adverse event related to the transfusion, however, contamination can occur during the process, from the collection process to its infusion. In determining the prevalence of blood culture contamination in the collection and procedures performed for each blood component. The true detection of a positive culture represents a challenge between the timing of the result and the identification of true pathogens and contaminants. Through a retrospective study, we analyzed the results of blood cultures performed from 2013 to 2020, including collections of HPCs from mobilized peripheral blood (MPBS) and bone marrow (BM); and blood components (platelets, erythrocytes, and plasma) obtained by apheresis using cell separators. Each blood culture. Fourteen species of contaminating microorganisms were identified, with a greater predominance of Staphylococcus epidermidis and Micrococcus spp representing 37% and 11% among the other microorganisms identified. Acinetobacter spp. 7.4% (2/27), Clostridium spp. 3.7% (1/27) and Salmonella spp. 3.7% (1/27) were also reported. The inferences of contamination in the blood culture results is lower than the described ranges, considering it the reference standard of contamination more rigorous than other institutions <1.4%.

Received date: March 02, 2022; **Accepted date:** March 04, 2022; **Published date:** May 10, 2022.