

Advances in the field of hematology

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Accepted on July 10, 2020

Introduction

Hematology is the science or study of blood, blood-forming organs and blood diseases. In the medical field, hematology includes the treatment of blood disorders and malignancies, including types of hemophilia, leukemia, lymphoma and sickle-cell anemia. Hematology is a branch of internal medicine that deals with the physiology, pathology, etiology, diagnosis, treatment, prognosis and prevention of blood-related disorders. Hematologists focus largely on lymphatic organs and bone marrow and may diagnose blood count irregularities or platelet irregularities. Hematologists treat organs that are fed by blood cells, including the lymph nodes, spleen, thymus and lymphoid tissue.

Discussion

In volume 3 Issue 1, various aspects of hematology were discussed by the authors from different parts of the world. In the article Tom van Meerten studied that Future prospects for DLBCL treatment: Combination of WEE1 inhibitors with CHOP and radiation therapy. Diffuse large B-cell lymphoma (DLBCL) is the most aggressive and common form of non-Hodgkin lymphoma. DLBCL arises during B-cell development in the germinal center reaction as a result of high levels of genomic rearrangements to create high affinity B-cell receptors [1].

Renata Eleutério commented on Reduction of frequency of pain in clinical trial with association of arginine and hydroxyurea in sickle cell anemia's patients in Brazil. Arginine is a substrate for NO production, which is a cofactor of the enzyme guanylate cyclase (GC), responsible for the reaction that makes the conversion of guanosine triphosphate (GTP) into cyclic guanine monophosphate (cGMP), causing relaxation of smooth muscles and vascular and consequently vasodilation [2].

Adel Zeglam shared his views on Hyper manganeseemia Revisited. Manganese (Mn) is a mineral that is considered an essential nutrient, involved in many chemical processes in the body, including processing of cholesterol, carbohydrates, and protein. It might also be involved in bone formation. Fairly high doses of manganese in bacteria disrupt replication and repair of DNA and cause mutations in microorganisms and mammalian cells. Manganese in mammalian cells induces DNA damage and aberrations to the chromosome [3].

Francis Ajeneye reviewed about The critical push for traceability compliance: A District General Hospital experience.

It is imperative to highlight the critical push for traceability of blood and its products. The ability to trace the pathway of the blood from the recipient to the original donor and vice versa is an important public health safeguard. In addition, accurate record keeping is an essential part of professional practice. The mandatory developments of the traceability process due to European legislation, Blood Safety and Quality Regulation (BSQR), Clinical governance and patient safety has prompted the necessity for this project [4].

Francis Ajeneye also shared his views on Eosinopenia as a Diagnostic Marker in Covid-19? Eosinopenia is defined as a decrease of circulating eosinophils $< 0.01 \times 10^9/l$. Eosinopenia is mediated by adrenal glucocorticosteroids and epinephrine in acute stress, whereas in acute inflammatory states, this is not reliant upon the endocrine mechanisms. The use of eosinopenia as a marker is an encouraging observation in COVID-19 infection, besides require further investigation [5].

References

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