OMICS International
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J Blood Disord Transfus 2015, 6:5
http://dx.doi.org/10.4172/2155-9864.C1.011

3rd International Conference on

Hematology & Blood Disorders

November 02-04, 2015 Atlanta, USA

Stem cell transplantation in lymphoma

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Curative treatment options for relapsed or refractory lymphoma are limited. Both autologous and allogeneic hematopoietic stem cell transplantation have been used in this setting. Traditionally, allogeneic stem cell transplantation has been associated with a lower relapse rate than autologous stem cell transplantation due to the graft versus lymphoma effect. Traditionally, this benefit from allogeneic transplantation was offset due to higher non-relapse mortality when compared to autologous transplant. With the introduction of reduced intensity and non-myeloablative regimens, the non-relapsed mortality from allogeneic transplantation has decreased in the last decade. However, in selected high risk lymphomas, the use of reduced intensity transplant alone may lead to early relapse prior to the emergence of an effective graft versus lymphoma effect. In such situations a tandem approach of autologous transplantation followed by reduced intensity allogeneic transplantation has been successful. In addition, the use of alternative donor transplants has widely expanded the donor pool for allogeneic transplants. Careful selection of transplant modality based on disease characteristics and comorbidities is a key to successful stem cell transplantation in lymphoma.

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Serum prohepcidin and iron metabolism in chloramphenicol induced anaemia in rats

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Prohepcidin is a precursor of hepcidin; a peptide hormone synthesized in the liver and considered to be the master regulator of iron metabolism. Chloramphenicol, a bacteriostatic antimicrobial has a broad spectrum of activity and known to cause reversible bone marrow suppression, aplastic anemia amongst others. The study is aimed at investigating the regulatory mechanism of hepcidin in anemia induced by chloramphenicol in Wistar rats. The intervention of *Telfairia occidentalis* on anemia will also be assessed. A total of 60 rats were used (140-160 g) and divided into two groups (control group, n=30 and chloramphenicol group, n=30). Each group was further sub-divided into three groups (n=10). Serum prohepcidin and interleukin-6 (IL-6) were measured by an enzyme linked immunosorbent assay (ELISA) technique. Serum iron, ferritin and total iron binding capacity (TIBC) were determined using standard methods. Histological examinations of spleen and duodenum were carried out using Perl's Prussian blue (iron stain) and haematoxylin and eosin stain (cell morphology). Results show that levels of serum prohepcidin, IL-6, iron, ferritin, haemoglobin and haematocrit were significantly decreased ($P<0.05$) in chloramphenicol administered rats. Conversely, the total iron binding capacity was significantly increased ($P<0.05$) by chloramphenicol treatment when compared to control. The architecture of the histological examined organs spleen and duodenum were distorted by chloramphenicol administration. Treatment with *Telfairia occidentalis* greatly enhanced the haemoglobin and haematocrit parameters as well as the iron metabolism indicators. Humoral immunity of the rat models also received a boost with T. occidentalis ingestion. The implication of decreased levels of prohepcidin and IL-6 in iron deficiency anemia by chloramphenicol and the role of T. occidentalis is discussed.

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