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Myelo-enhancement by *Astragalus membranaceus* in male albino rats with chemotherapy myelo-suppression: Histological and immunohistochemical study

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Myelo-suppression is the most common toxicity encountered in the oncology clinic today. This study was planned to investigate the possible protective and therapeutic role of the traditional Chinese Medicinal Herb; *Astragalus membranaceus* (AM), on chemotherapy-induced myelo-suppression. This study was carried out on thirty six adult male albino rats. They were divided into: Group-I Control received phosphate buffered saline (PBS) solution. Group-II were injected IP with cyclophosphamide (CY) for 3 days (IIa) and continued for one more week to receive AM orally (gIIb). Group-III received CY IP together with AM orally for 3 days. Group-IV received AM orally for one week (gIVa) and continued for extra three days receiving CY IP with AM orally (gIVb). Blood samples were analyzed for Total Leucocytic Count and Lymphocytic Count. Counting of CD34 positive cells in bone marrow was performed by flowcytometry. Bone marrow sections were subjected to H&E stain as well as immunohistochemical staining for anti- CD20 antibody. The mean area percentage of cellular bone marrow regions occupied by developing hematopoietic cells, mean area of fat cells and mean number of CD20 immunopositive B-lymphocytes in the bone marrow were measured by histomorphometric studies and statistically compared. AM proved to have a myelo-protective and myelo-therapeutic capacity, evidenced at both laboratory and morphological levels. The greatest myelo-potentiating effect of AM was achieved when supplied before and together with CY therapy.

Biography

Noha Mohammed Afifi Amin has completed her MD from Kasr Al-Ainy School of Medicine, Cairo University. She is appointed as Professor of Histology and Cell Biology since 2013. She is a Fellow of "Diploma of Health Profession Education" (DHPE) with honors, (2011) on line, in collaboration with Maastricht University, the Netherlands. She has published more than 15 papers in reputed journals.

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