

Pre-transplant low serum albumin levels may be associated with poor survival in patients who underwent autologous haematopoietic stem cell transplantation (autoHSCT)

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Objectives and Aim: Serum albumin level is mainly a marker of nutritional status in both healthy subjects and patients with malignancies. Our objective was to investigate the association of pre-transplant serum albumin levels with prognosis in autologous HSCT recipients.

Materials and Methods: We retrospectively analysed 106 patients' data who had undergone autologous HSCT diagnosed with multiple myeloma, Hodgkin Lymphoma and Non-Hodgkin Lymphoma. Serum albumin, phosphorus, D-dimer and uric acid, CD34+ cell count, BMI, presence of neutropenic fever of 106 patients were evaluated. The patients' data were obtained from the file records.

Results: 33 (31.1%) of the patients were female, and 73 (68.9%) were male. The diagnosis of the patients were; Hodgkin Lymphoma (33 patients, 31.1%), non-Hodgkin lymphoma (34 patients, 32.1%), and multiple myeloma (39 patients, 36.8%). The median age was found 42 years (min-max: 17-67). Univariate and multivariate analysis showed that low albumin levels (<3.2g /dL) were associated with decreased overall survival (OS) and disease-free survival (DFS) compared with normal albumin levels ($p=0.016$ and $p=0.001$ respectively). A higher risk of death was observed in low-albumin group (HR=2.69, CI:1.17-6.24, $p=0.016$ for OS and HR=2.69, CI:1.17-6.24 $p=0.001$ for DFS). Cox regression analysis showed that; low albumin levels were associated with increased risk of relapse but this was not statistically significant (HR:0.97 with %95 CI:0.28-3.32, $p=0.96$). Serum uric acid, D-dimer, phosphorus levels, CD34+ cell count, BMI, presence of neutropenic fever, age and gender were not associated with poor OS and DFS ($p>0.05$).

Conclusion: Pre-transplant serum albumin levels may be associated with poor outcomes in patients who had undergone autologous hematopoietic stem cell transplantation regardless with primary diagnosis

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