

## OXIDATIVE STRESS AND ANTIOXIDANT DEFENSES IN THE CONDITIONING PHASE OF BONE MARROW TRANSPLANTATION PATIENTS

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Bone marrow transplantation (BMT) is widely accepted therapeutic modality for a number of malignant, hematologic, immunologic, and genetic diseases, including autologous and allogeneic therapy. Free radicals, are often associated the complications in the BMT and have been implicated in the action of many cytostatic drugs and irradiation used in the conditioning regimen of this patients. Then the objective of this study is evaluate some oxidative stress indicators and antioxidant defenses in the patients in this phase. In the present study were used blood of patients in the conditioning phase prior to BMT. Where were available TBARS, catalase (CAT), superoxide dismutase (SOD), non-protein and protein thiol groups (SH) and vitamin C and comparable with the control group. The results demonstrate that the vitamic C, CAT and protein thiol groups are significantly decreased and TBARS production is significantly increased in the patients when compared to the controls ( $p < 0,05$ ). SOD and non protein thiol groups have no differences. In summary, this study revealed a disturbance of the pro-oxidative/antioxidative balance in the blood of patients undergoing BMT.

Key words: bone marrow transplantation, free radicals, oxidative stress