

Introduction: The standard or the intensive Hodgkin lymphoma chemotherapy reduces the bone marrow ability and may strike also endogenous erythropoietin production. Two groups of patients took part in this trial. One is given recombinant erythropoietin (r-EPO) supply during therapy, the control group receives similar treatment except no erythropoietin. The changes of various parameters are assessed in comparison on dosage of r-EPO.

Methods: This trial includes patients cured in HD 9C, HD 12, HD 15 standard or intensive treatment between 1995 and the end of 2005 in Hematology Clinic of 3rd Medical Faculty of Charles University Hospital Královské Vinohrady in Prague. The retrospective, randomized, controlled trial covers 139 patients: 85 were given r-EPO, 54 without this supply.

Results: The primary hypothesis assessment, i.e. the quantity of transfusions in groups with r-EPO supply/without r-EPO, appears that the number of patients without any need of transfusion is significantly different (28%/15%). Also, the difference in the number of patients with a need of more than eight transfusions during chemotherapy is important (20%/28%) as well as the average number of transfusions throughout therapy (6.3/4.4). The other parameters assessment: the percentage of patients without any need of hospitalization during therapy is similar (40%/40.7%). Nonetheless, in patients in r-EPO supply, most hospitalizations were short-term, i.e. 30 days and less during 8cycle chemotherapy (48.2%/35.2%). In group without r-EPO supply hospitalization exceeded 30 days or even 60 days. Also, the percentage without anemic symptoms during therapy is significantly higher in patients with r-EPO (25%/15%).

Discussion: In the basis of this study, the first investigating r-EPO supply given to Hodgkin's disease patients, it can be concluded, that the r-EPO supply in patients on standard or intensive chemotherapy is reasonable, not even in objective view, but very probably in patient himself and thereby higher compliance during long and difficult chemotherapy. Statistic significance reveals lower need of erythrocyte transfusions in patients treated with r-EPO.