THROMBOTIC COMPLICATIONS IN CHRONIC MYELOPROLIFERATIVE DISORDERS

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Background. Thrombotic complications are major cause of morbidity and mortality in patients with myeloproliferative disorders. The incidence of thrombotic events in myeloproliferative disorders does not correlate significantly with gender or platelet counts, but rather with age and a history of cardiovascular disease and / or thromboembolic events. The number of leukocytes is an independent predictor for major thrombosis, with a cut-off > 15 x 109/ l. Low-dose aspirin significantly reduce the risk of thrombotic complications in polycythemia vera (PV) patients, and is used in essential thrombocythemia (ET). Hydroxyureea, anagrelide and interferon-α are currently used treatments.

Aim. We performed a retospective study on a group of patients with myeloproliferative disorders, especially ET, classified according to WHO 2008 guidelines on treatment response and complications occurring in these patients.

Methods. We retrospectively studied 97 patients (pts), 41 male and 56 female with a median age of 52 years (27-80). Thrombosis at diagnosis were present in 26/97 patients. Median platelet count was 850 x 109/L (602-2.500x109/L), splenomegaly was present in 35 patients, and fibrosis in 42 patients. Patients were treated with Hydroxyureea (HU) (38 patients), 49 patients received anagrelide, 10 patients received interferon-a.

Results. Hemoglobin level and platelet count was similar in the 2 groups of patients (group of patients who received only HU and the group of patients who received anagrelide, interferon). White blood cells count (WBC) and platelet count were correlated with thrombosis at the time of diagnosis. In the study group it was found following risk factors: Hypertension 28.6%, smoking 14, 3%, diabetes mellitus 2.4%. Also, the investigation of thrombotic markers revealed: JAK2 mutation 20%, elevated homocystein level 5% , Factor VIII elevation 7%, Protein S deficiency 7 %, Factor V Leiden mutation 5%, Fibrinogen 17%, antiphospholipid antibody syndrome 5,5 %, Lupus anticoagulans 3, 2%, Factor IX elevation 1.7%, AT III deficiency 1,4%, protein C deficiency, 0.6%, prothrombin mutation 0,5 %. Thrombotic events consisted of 14 arterial thrombosis (6 coronary disease, 5 stroke, 3 intestinal infarct) and 12 venous thromboses (8 deep and 3 splanchnic vein thrombosis, 1 cerebral sinus thrombosis).

Conclusion. There is an increased incidence of thrombotic events in myeloproliferative disorders. They are influenced by the presence of thrombogenic risk factors and thrombotic markers.