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Hemostatic profile in patients of myeloproliferative neoplasms- A 5 year experience from a tertiary care centre in North India

Rashmi Kushwaha, Yatendra, Geeta Yadav, Mili Jain, S P Verma, U S Singh, A Kumar and Tripathi A K
King George's Medical University, India

Background: Patients of myeloproliferative neoplasm (MPN) commonly present with abnormalities in coagulation tests that are consistent with hypercoagulable state. Some individuals with MPN exhibit a pattern of exclusive bleeding or thrombotic events; many others have both bleeding and thrombosis.

Objectives: To assess the hemostatic defects and platelet functions in patients of MPN.

Methods: Five year prospective study done at a tertiary care center in North India. All recently diagnosed cases of MPN along with 50 age and sex matched controls were included. Patients on antiplatelet drugs, anti myeloproliferative treatment, vitamin K agonists or antagonists, OCP's, Platelet count <1, 00, 000/µl, high grade fever, liver disease, pregnancy were excluded. All the patients underwent screening investigations like CBC, peripheral smear evaluation, bleeding time, prothrombin time, activated partial thromboplastin time, Protein C and S measurement, aggregation with ADP 5µM (CHRONOLOG 700).

Result: Fifty cases were included. There was an occult prothrombotic state, suggested by significantly ($p<0.001$) reduced levels of Protein C, Protein S. But no patient presented with frank thrombosis. Eight out of 50 patients had hemorrhagic manifestations ranging from subdural hematoma to pin point petechial hemorrhages. Patients of CML-CP, ET, PV, PMF, MPN-NOS showed significantly reduced maximal aggregation with 5 µM ADP ($p<0.001$). MPV also showed a statistically significant increase in these patients.

Conclusion: Thrombohemorrhagic complications significantly affect the morbidity and mortality of MPN patients. Timely diagnosis of hemostatic abnormalities can decrease the morbidity in these patients.

Biography

Rashmi Kushwaha has completed her MD Pathology from Rajiv Gandhi University of Health Sciences, Karnataka, India. At present, she is working as Additional Professor, Lymphoma-Leukemia Lab, Department of Pathology, King George's Medical University, Lucknow, India. She has been working in the above mentioned lab since 10 years. She has 28 scientific paper publications in indexed journals and two research projects. She has delivered nine guest lectures in various conferences. She is trained in flow cytometric immunophenotyping, platelet aggregation studies and coagulation workup.

docrashmi27@yahoo.co.in

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