IS JAK2V617F MUTATION THE ONLY CULPRIT FOR VENOUS THROMBOSIS IN PHILADELPHIA-NEGATIVE CHRONIC MYELOPROLIFERATIVE NEOPLASMS?
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Introduction: Polycythemia vera (PV), essential thrombocythemia (ET), and primary myelofibrosis (PMF) are Philadelphia(Ph)-negative chronic myeloproliferative neoplasms (CMPN). The most common genetic disorder in CMPN is the JAK2-V617F mutation. Materials&MMethods: We screened 155 Philadelphia (Ph)-negative CMPN patients (58.1% females, 41.9% males). We recorded clinical data, JAK2-V617F mutation status; and determined risk factors for venous thrombosis. Results: There were 155 patients: 98(63.2%) had ET, 48(31%) PV, 9(5.8%) had PMF. Hypertension was present in 44.9%(44) of ET, 43.8%(21) of PV, and 33.3%(3) of PMF patients (p=0.799). Diabetes mellitus was present in 12.2%(12) of ET, 14.6%(7) of PV patients (p=0.473). JAK2 was positive in 52(62.7%) patients. The initial thrombotic attack had occurred before diagnosis in 23.4%(22) of ET, 31.1%(14) of PV, and 12.5%(one) of PMF patients. The frequencies of thrombosis after diagnosis were 20.8%(20 patients) in ET, 12.5%(6 patients) in PV, and 12.5% (one patient) in PMF. Frequencies of thrombosis before and after diagnosis were similar. JAK-2 positive patients had significantly more frequent (p<0.0001) venous thrombosis before diagnosis than others; incidences of venous thrombosis after diagnosis were similar between JAK2-positives and –negatives. Smoking did not impose a higher risk of venous thrombosis except in ET patients (p=0.001). Hypertensives had more frequent venous thrombosis before diagnosis than normotensives (p=0.008). Diabetes wasn’t a risk factor for venous thrombosis. Conclusions: JAK2 positivity was a risk factor for earlier venous thrombosis in the course of CMPNs. Classical cardiovascular risk factors like smoking, diabetes mellitus, and hypertension had limited roles for prediction of venous thrombotic attacks.