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ABSTRACT N. PO35

CEREBRAL VEINS THROMBOSIS IN PATIENTS WITH AND WITHOUT MYELOPROLIFERATIVE NEOPLASM: A REAL LIFE RETROSPECTIVE MONOCENTRIC STUDY.

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Background and Aims: Cerebral veins thrombosis (CVT) has an estimated annual incidence of 1 to 2 cases/100000 persons/year in the general population and it is more common in young adult females, largely due to risk factors as oral contraceptives, pregnancy and puerperium. Myeloproliferative Neoplasms (MPN) are included among prothrombotic risk factors predisposing to CVT. Our study aimed to evaluate the prevalence of risk factors for venous thromboembolism (VTE) and clinical outcomes in patients with CVT associated with MPN and in those not affected with MPN.

Methods: Our study included 33 patients diagnosed with CVT referred to our Hospital in the last 4 decades. Patients with CVT associated with malignancies different from MPN were excluded. Patients were divided into two groups on the basis of presence of MPN, classified according to the diagnostic criteria in use at the time of diagnosis and updated, when possible, to the most recent standards (ICC-2022). Clinical data were retrospectively collected for all included patients such as major risk factors for VTE, recurrence of venous thrombosis in typical or atypical sites, occurrence of major bleedings according to ISTH classification, all-causes mortality, and disability using the modified Ranking Scale.

Results: The studied CVT population consisted of 12 patients affected with MPN (9 JAK2V617F positive, 1 CALR1 positive, 2 non tested for driver mutations) and 21 patients without MPN observed for a median time of 73 months (14-526). In both groups, young age and female sex were predominant, according to literature. Among MPN-patients with CVT, 3 patients had Polycythemia Vera, 8 had Essential Thrombocythemia and 1 had Primary Myelofibrosis. CVT was the presenting symptom leading to MPN diagnosis in 75% of these patients. One or more major risk factors for DVT were found in 41.6% of patients with MPN and in 66.6% of patients without MPN. Most of the patients in both cohorts underwent thrombophilia screening: a congenital or acquired thrombophilia was found in 8.3% of MPN patients and in 66.6% of non-MPN patients, but this difference was not statistically significant. We observed 5 venous thrombosis recurrences in 4 MPN patients and 2 recurrences in 2 non-MPN patients (p=0.16). A significantly higher incidence of major bleeding events (p=0.027) and all-cause mortality (p=0.003) was observed in patients with MPN compared to patients without MPN (Table1). Among all studied patients, only one showed important neurologic disability after CVT (mRS>1).

Conclusions: We observed that MPN patients present less additional risk factors for venous thrombosis and a trend towards a higher number of thrombotic recurrences when compared to non-MPN cohort. In addition, in MPN patients we found a significant increase in major bleedings and in all-cause mortality than in non-MPN patients, likely due to the natural history of MPN. Further investigations in a larger population are needed to confirm our data.

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	MPN	NON-MPN	P VALUE
TOTAL	12	21	
GENDER MALE, N(%) FEMALE, N(%)	5 (41.7%) 7 (58.3%)	7 (33.3%) 14 (66.7%)	0.632
AGE (years, IQR)	40 (25.5;50.5)	48 (32;52)	0.420
MEDIAN FOLLOW UP AFTER CVT, MONTHS (IQR)	152.5 (52.5;219.2)	63 (31; 197)	0.286
RISK FACTORS FOR VTE n (%) ORAL CONTRACEPTIVES PREGNANCY/PUERPERIUM SURGERY AUTOIMMUNE DISEASES THROMBOPHILIA FAMILY HISTORY OF VTE PERSONAL HISTORY OF VTE	5 (41.6%) 2 1 0 0 1 1 2	14 (66.6%) 7 1 1 2 6 2 2	0.162
PATIENTS WITH ≥ 2 RISK FACTORS, N (%)	2 (16.6%)	5 (23.8%)	0.629
CVT-ASSOCIATED INTRACRANIAL BLEEDING, N (%)	2 (16.6%)	3 (14.2%)	1.00
PATIENTS WITH AT LEAST 1 VENOUS THROMBOSIS AFTER CVT, N (%)	4 (33.3%)	2 (9.5%)	0.159
PATIENTS WITH MAJOR BLEEDINGS AFTER CVT, N (%)	4 (33.3%)	1 (4.7%)	0.027
DEATH FOR ALL CAUSES, N (%)	5 (41.7%)	0 (0%)	0.003