thrombotic and vascular complications in some PV cases. Chemotherapy improves significantly the patient's quality of life, reduces the rate of thromboembolic events and extends the life-span, comparable with that of total population of Moldova.

https://doi.org/10.1016/j.htct.2020.09.076

PP 15

Disease and clinical characteristics of patients with chronic myeloproliferative neoplasms: 11-year single center experience

P. Akyol, A. Yıldız, H. Afacan Öztürk, S. Maral, M. Reis Aras*, F. Yılmaz, B. Saglam, M. Tıglıoglu, M. Albayrak

Diskapi Yildirim Beyazit Training and Research Hospital, Ankara, Turkey

Objective: BCR/ABL-negative myeloproliferative neoplasms are characterized by over-production myeloid lineages in the bone marrow. Polycythemia vera, essential thrombocythemia and primary myelofibrosis are the most common myeloproliferative neoplasms. Diagnosis is made according to the WHO diagnostic criteria from clinical data, hematological and biochemical analysis and BM histology. The aim of this study was to analyse patient demographic characteristics, clinical features, laboratory findings, mutational status together with complications, clinical course and survival.

Methodology: This study was conducted on patients diagnosed with myeloproliferative neoplasms between 2008 and 2019. Hemogram and biochemical parameters, demographic information, mutation analysis, management, complications and follow-up periods were recorded for all patients. Survival rates were calculated and the effect of the parameters on overall survival was analyzed.

Results: Evaluation was made of 247 patients, comprising 105 polycythemia vera, 126 essential thrombocythemia and 16 primary myelofibrosis patients. The overall frequency of driver mutations was 96.1% for PV, 71.4% for ET and 75% for PMF. Hydroxyurea was the most commonly used first-line treatment agent and the most common indication for switching to second-line treatment in all disease subgroups was the development of side-effects. During follow-up, 11 polycythemia vera, 14 essential thrombocythemia and 2 primary myelofibrosis patients developed thromboembolic complications. Median overall survival could not be reached in polycythemia vera and essential thrombocythemia patient and determined as 70.3 months in primary myelofibrosis patients. Age, LDH, ferritin and platelet/lymphocyte ratio at the time of diagnosis and thromboembolic complications were determined to have a statistically significant effect on survival in all patients.

Conclusion: Lower survival rates were seen in the primary myelofibrosis patients although thromboembolic complications were observed at similar rates in all 3 disease subgroups. In addition to known risk factors such as age and thromboembolic complications, parameters such as LDH, ferritin and PLR, which may be considered to indicate disease activity and inflammation, can also be used as prognostic markers.

https://doi.org/10.1016/j.htct.2020.09.077

PP 16

The frequency of calreticulin and mpl gene mutations in bcr-abl and jak2 unmutated chronic myeloproliferative neoplasms and its effect on the outcome

T. Tiryaki[1], A. DağLar Aday[2], M. Güzel Mastanzade[1], M. ÖZbalak[1], D. Özlük[1], F.Y. Onal Hindilerden[1], M. Yenerel[1], A. Yavuz[1], S. Kalayoğlu Beşışık[1,*], M. Nalçacı[1]

[1] *İstanbul University, İstanbul Medical Faculty, Department of Internal Medicine, Division of Hematology, İstanbul, Turkey*
[2] *İstanbul University, İstanbul Medical Faculty, Department of Medical Genetics, İstanbul, Turkey*

Objective: The World Health Organization (WHO) embedded calreticulin receptor (CalR) and myeloproliferative leukemia virus (MPL) gene mutation in diagnostic criteria for primary myelofibrosis (PMF) and essential thrombocythemia (ET), since 2016). We aimed to identify the frequency of CalR and MPL gene mutations and their effects on clinical outcomes in bcr-Abl and Jak2 unmutated chronic myeloproliferative neoplasms (MPNs).

Methodology: We screened bcr-abl negative and Jak2 unmutated MPNs diagnosed and treated between March 2004 and January 2013 at İstanbul Medical Faculty. We revised the MPN diagnosis according to the latest WHO classification. The association of CalR and MPL mutation with thrombotic complications, leukemic transformation, and survival was was defined.

Results: A total of 46 ET ($n = 34$) and PMF ($n = 12$) patients enrolled in the study. The demographic characteristics were similar between the two disease groups. Patients' mean age was 53.5 years (range 23–93 years) and gender distribution as 18 male to 28 female. A total of 18 patients (39.1%) had CalR mutation, and 4 (8.69%) patients MPL mutation. None of the ET patients had MPL mutations. CalR positive PMF patients' mean age was lower compared to patients without the mutation (p: 0.028). During the follow-up period, 8.3% of PMF and 5.9% of ET patients experienced leukemic transformation. None of the leukemic transformed patients had gene mutations. Among thrombosis complications, six patients developed thrombosis. All of them were ET patients, and 3 of them had CalR mutation two as CalR type 1 and one as CalR type 2. The mortality ratio was higher in patients in PMF, regardless of mutational status (p: 0.006).

Conclusion: Our study cohort is small to make a definite conclusion. Apart from the diagnostic guide, CALR mutations seem to have a prognostic effect is different in PMF and ET. This prognostic significance of CALR could be different among the MPN categories.

https://doi.org/10.1016/j.htct.2020.09.078