Burden of Polycythemia Vera in Israel: a Retrospective Study

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INTRODUCTION

Polycythemia Vera (PV) is a chronic hematologic cancer characterized by abnormal overproduction of blood cells and carries substantial morbidity and mortality from venous and arterial thrombosis. The epidemiology of PV in Israel, treatment response and clinical and economic consequences are not well defined.

OBJECTIVES

The objectives of this study are to describe the epidemiology of Hydroxyurea (HU) resistance and intolerance in PV adult patients, and to evaluate the outcomes of HU resistance/intolerance, in routine clinical practice in Israel.

METHOD

Retrospective observational database study based on Maccabi healthcare services (MHS) database of electronic medical records. Index date was defined as the first HU purchase date for PV during 2000 -2015 for patient managed by HU. For intolerant/resistant groups, transition date was used as index date. Transition date for intolerant group was defined by earliest date of low lab result/stop HU treatment/receiving second line treatment
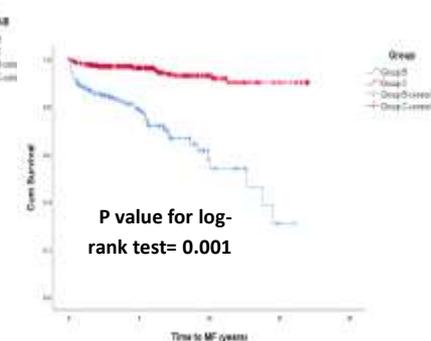
RESULTS

830 patients were identified. 318 (38%) were defined as "Intolerant" and 509 (61%) as "Stable". Median follow up time was 4.9 and 5.5 years for "Intolerant" and "Stable" groups, respectively. Thrombotic event rate per 100 patient-years was 1.6 versus 0.5 (p<0.001). Progression to MF occurred in 28% versus 5% (p<0.001). Death occurred in 58% of "Intolerant" compared with 30% of "Stable"(p<0.001). Treatment costs for an Intolerant patient were 2.6-fold higher.

Kaplan Meier curve for time to Thrombosis (n=827)

P value for log-rank test= 0.001
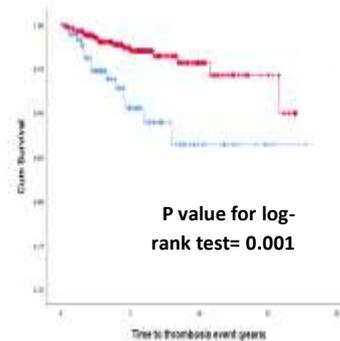
Kaplan Meier curve for time to Myelofibrosis (n=644)

P value for log-rank test= 0.001

CONCLUSIONS

The results of this analysis indicate that intolerance to HU treatment in PV patients is associated with serious clinical and economic implications indicating a need for improved treatment for these patients.