PATTERNS OF CLINICAL PRESENTATION AND OUTCOMES IN POLYCYTHEMIA VERA (PV); A SINGLE CENTRE STUDY FROM LOWER MIDDLE INCOME COUNTRY, PAKISTAN

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BACKGROUND

Polycythemia Vera is a chronic myeloproliferative neoplasm which features the increased production of red blood cells from abnormal clonal growth of hematopoietic stem cells, causing elevated red cell mass. The JAK 2 V617F gene mutations is present in over 95% of cases, while JAK2 Exon 12 mutation is present in 2-3% of cases and 1% are un-mutated. Data on the clinical presentation and outcomes of PV patients in lower middle-income countries like Pakistan is limited. This study aims to describe the patterns of clinical presentation, laboratory features, and outcomes in patients diagnosed with PV at a single center in Pakistan.

METHOD

This single-centre prospective study analyzed 34 patients with Polycythemia Vera, including demographic, clinical, laboratory, JAK2 mutation, and treatment outcome data. Descriptive statistics were used to summarize patient characteristics and clinical findings. Kaplan–Meier analysis was performed to estimate overall survival (OS) and progression-free survival (PFS)

CONCLUSION

PV patients in Pakistan show clinical and laboratory characteristics broadly comparable to global data, with a high prevalence of JAK2 V617F. Despite favourable short-term outcomes, the high rate of thrombosis at diagnosis highlights the need for earlier detection and improved risk stratification to optimize long-term outcomes

RESULTS

Among 34 patients, **73.5% were male**, with a median age of **51 years (22–85)**, and **97.1% were JAK2 V617F positive**. Headache (29.4%) was the most common symptom, while hepatomegaly and splenomegaly occurred in 17% and 23.5%, respectively. Median **Hb was 17.3 g/dL, Hct 54%, and platelet count 638.5 × 10^9/L**. Thrombosis was present at diagnosis in **32.4%**, and **50% were high-risk**. Most patients (70.6%) required fewer than five phlebotomies; all received antiplatelet therapy and 70.6% received cytoreduction. **1000-day OS was 94.7% and PFS was 92.1%**. Disease progression occurred in **11.8%**, predominantly due to thrombosis (75%), while 25% progressed to myelofibrosis

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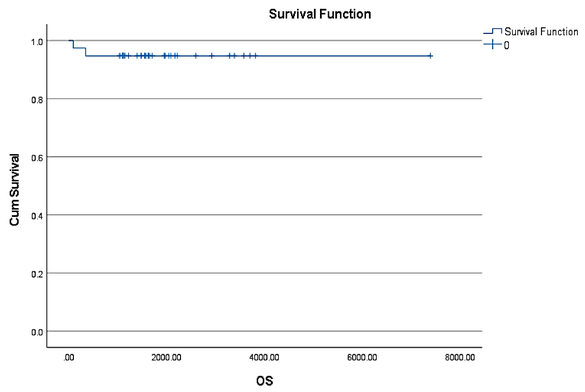
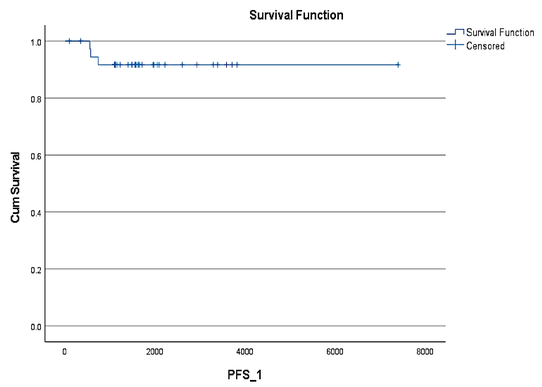
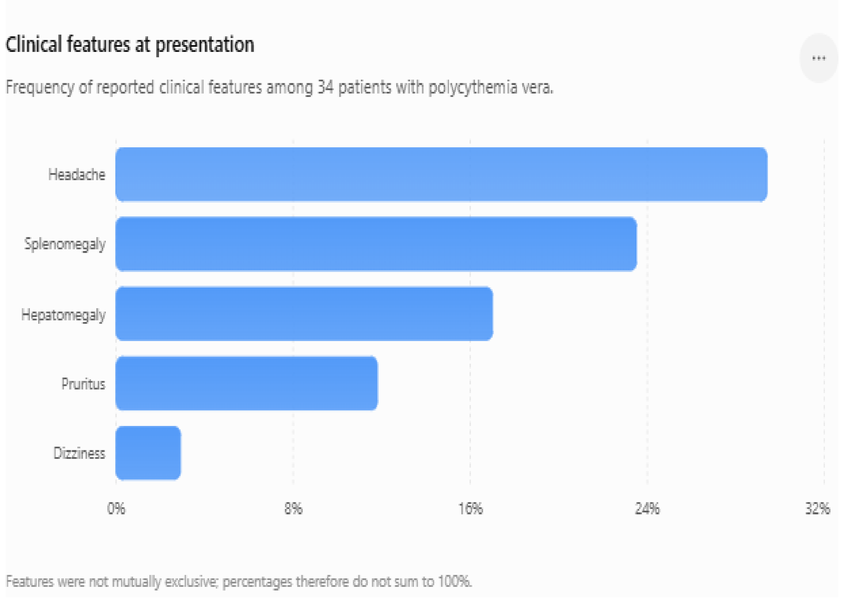




Patient Profile & Key Clinical Findings (N = 34)	
Parameter / Variable	Finding / Frequency
Age at diagnosis (years), Median (Range)	51 (22–85)
Gender (Male), n (%)	25 (73.5%)
JAK2 V617F Mutation Positive, n (%)	33 (97.1%)
History of Thrombosis at presentation, n (%)	11 (32.4%)
Splenomegaly, n (%)	8 (23.5%)
High-Risk Stratification, n (%)	17 (50.0%)
Hemoglobin / Hematocrit, Median	17.3 g/dL / 54.0%
Platelet count (× 10^9/L), Median	638.5



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