OUTCOMES OF HAIRY CELL LEUKEMIA IN RESOURCE-CONSTRAINED SETTINGS: A RETROSPECTIVE SINGLE-CENTER STUDY FROM PAKISTAN

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Introduction

- Hairy cell leukemia (HCL) is a rare, chronic B-cell lymphoproliferative disorder characterized by progressive pancytopenia, splenomegaly, recurrent infections, and the accumulation of abnormal B lymphocytes in the bone marrow, spleen, and peripheral blood.
- Although treatment with purine analogues has substantially improved remission rates and long-term survival, evidence regarding clinical presentation, treatment patterns, and outcomes remains limited in resource-constrained settings.
- Local data are therefore needed to better understand disease characteristics, treatment responses, and challenges in patient management.

Aim

- This study aimed to comprehensively evaluate the clinical characteristics, patterns of disease presentation, treatment approaches, therapeutic responses, and treatment-related toxicities among patients with classical hairy cell leukemia treated at a tertiary care center in Pakistan.
- It also sought to assess long-term outcomes, including progression-free survival (PFS) and overall survival (OS), thereby providing real-world evidence on the management and outcomes of HCL in a resource-constrained setting..

Method

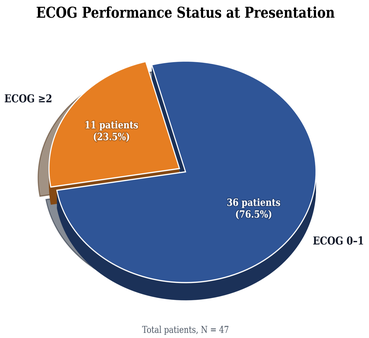
- This single-center retrospective cohort study included adult patients diagnosed with classical HCL between January 2010 and January 2026.
- Diagnosis was established by peripheral blood morphology, flow cytometry, and/or bone marrow biopsy according to WHO criteria.
- Medical records were reviewed for demographic characteristics, ECOG, presenting complaints, baseline hematologic parameters, treatment details, response assessment, toxicities, relapse, and survival outcomes. Statistical analysis was performed using SPSS version 29. We estimated survival outcomes using Kaplan–Meier analysis.

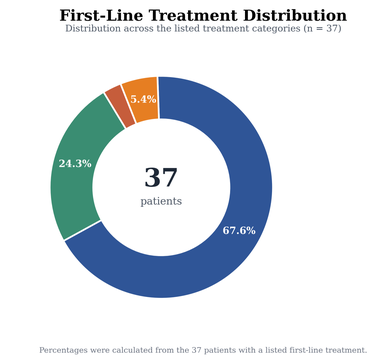
Conclusion

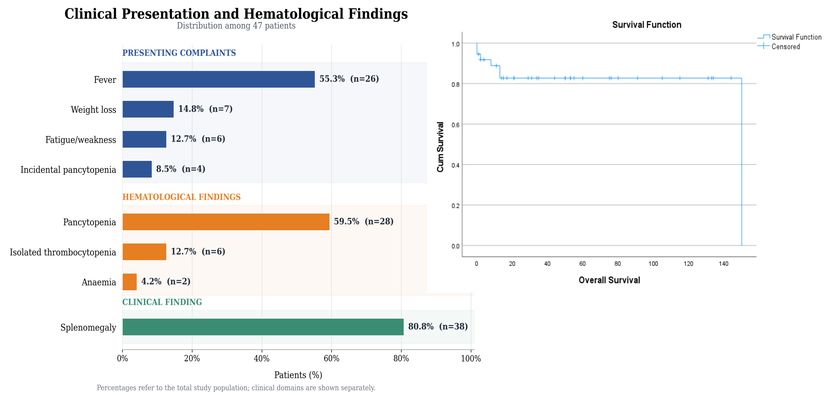
- In resource-constrained settings, while cladribine monotherapy remains a valuable and accessible option due to its low cost and favorable safety profile, the addition of rituximab appears to achieve significantly higher remission rates.
- Despite challenges including delayed diagnosis, limited molecular testing, financial constraints, and restricted access to targeted diagnostics such as BRAF mutation analysis, favorable long-term disease control was achievable in the majority of patients.

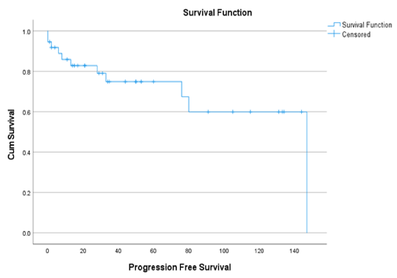
Results

- A total of 47 patients were included. Mean age at presentation was 53.4 ± 12 years. 9 patients were lost to follow-up after diagnosis confirmation, and one died before treatment.
- A total of 37 out of 47 patients received treatment. Response assessment was performed at [6 months ± 8 weeks] using peripheral blood counts, clinical examination, and bone marrow evaluation where available.
- Complete remission (CR) was achieved in 80% of patients receiving cladribine monotherapy compared with 88.8% of patients receiving cladribine plus rituximab. Relapse occurred in 5 patients at a median interval of 3 years.
- At a median follow-up duration of 5 years, the OS and PFS were 81% and 73%.









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