TITLE: CLINICAL PRESENTATION AND OUTCOMES OF PATIENTS WITH ACUTE PROMYELOCYTIC LEUKEMIA; A REAL-WORLD EXPERIENCE

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BACKGROUND

Acute Pro myelocytic Leukemia (APL) is a discrete subtype of Acute Myeloid Leukemia resulting from a specific translocation t(15;17), resulting to formation of PML/RARA fusion gene. There is characteristic block in myeloid progenitor cell differentiation and resulting in promyelocytes accumulation in the bone marrow. Typical clinical presentations include hemorrhagic manifestations and thrombotic events.

METHOD

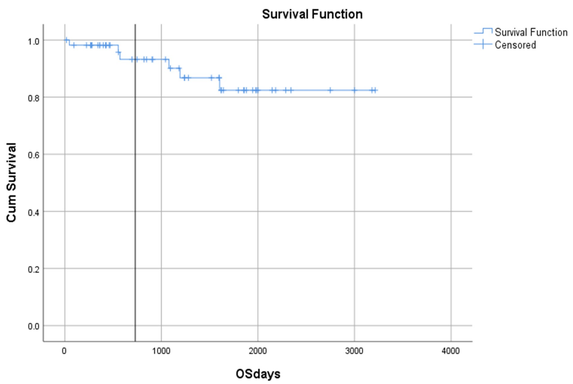
This retrospective observational study was conducted at Armed Forces Bone Marrow Transplant Centre Rawalpindi. Institutional ethical approval was obtained. We Analyzed the data of patients with APL between January 2014 and December 2025. Patient records included age, sex, presenting complaints, laboratory parameters (including blood counts, molecular studies, bone marrow examination, DIC profile), chemotherapy regimens and their complications, treatment response and survival outcomes.

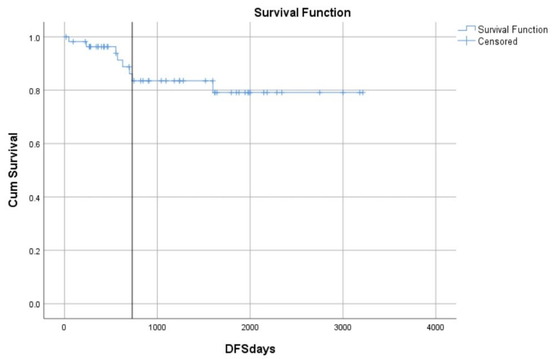
CONCLUSION

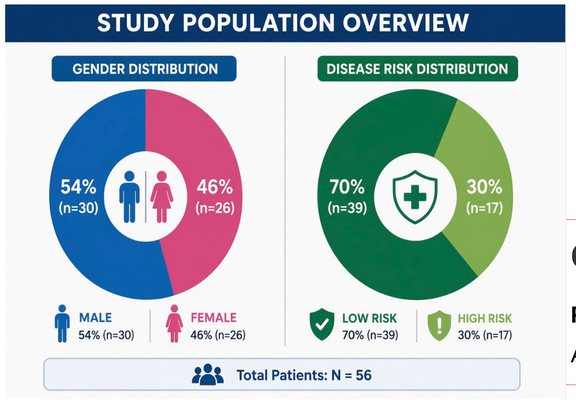
This study highlights various challenges in the management of patients with APL. Despite resource limited settings, the outcomes of patients with APL in LMICs are comparable to those in high-income countries. Early diagnosis, improved risk stratification, MRD assessment, rigorous and tailored supportive care strategies are a backbone of improved outcomes in APL.

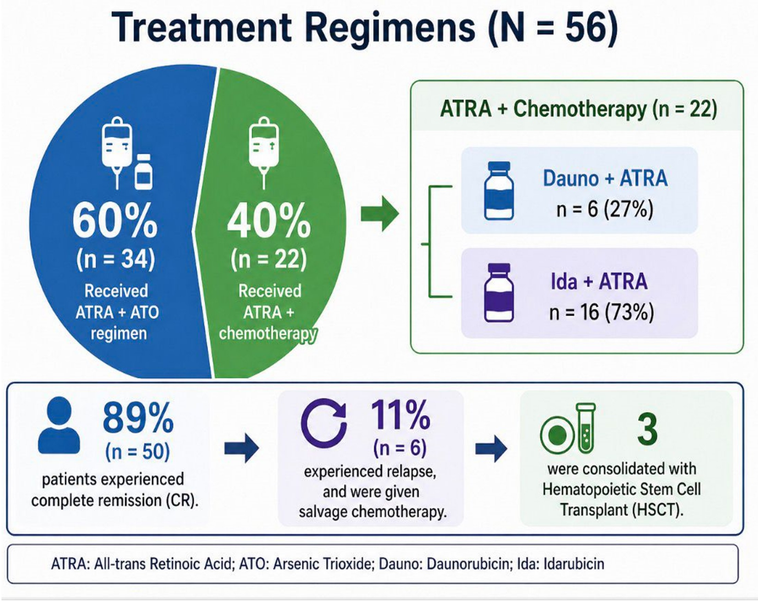
RESULTS

Data of 56 patients with APL was available for final analysis. The median age at diagnosis was 30 years. 54% (n=30) were male and 46% (n=26) were female. Low risk and high-risk disease were present in 70% (n=39) and 30% (n=17) patients respectively. Main presenting feature was bleeding i.e. 61% (n=34) followed by thrombotic complications 7% (n=4). 60% (n=34) received ATRA+ATO regimen, 40% (n=22) patients with ATRA + chemotherapy (Dauno +ATRA, Ida +ATRA). 89% (n=50) patients experienced complete remission (CR). 11% (n=6) experienced relapse, and were given salvage chemotherapy. Among them 3 were consolidated with Hematopoietic Stem Cell Transplant(HSCT). At a median follow-up of 41 months, the 2-year overall survival (OS) was 93% (95% CI: 87%–99%), and the 2-year disease-free survival (DFS) was 83.5% (95% CI: 72%–95%).









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