

Treatment Outcomes in CML Patients Treated With Tyrosine Kinase Inhibitors at a Tertiary Teaching Hospital in South Africa

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Abstract

Background

Chronic myeloid leukemia (CML) has become one of the most treatable hematologic neoplasms since the advent of the tyrosine kinase inhibitors (TKIs), but it was not known if similar treatment outcomes could be achieved in a resource-limited country. We tested the hypothesis that, despite challenges to access to second-generation TKIs, excellent responses could be replicated in the setting of limited resources.

Patients and Methods

Records of 58 patients with newly diagnosed CML in the chronic phase treated with TKIs at a tertiary teaching hospital in Cape Town, South Africa between 2003 and 2012 were reviewed and assessed according to European LeukemiaNet (ELN) criteria.

Results

After a median follow-up of 60.5 months, progression-free survival at 60 and 96 months was 79.98% and 68.4%, respectively. Overall survival at 60 and 96 months was 92.9% and 83.6%, respectively. Progression to blast phase at 60 months was associated with poorer survival ($P = .0002$) but progression to accelerated phase was not ($P = .1456$). Attainment of a complete cytogenetic response at 12 months ($P = .28$) or major molecular response at 18 months ($P = .268$) did not have prognostic significance.

Conclusion

Despite delays in achievement of the target responses defined according to ELN criteria, the use of imatinib mesylate as a first-line treatment can still result in treatment outcomes comparable with those in developed countries. These data suggest opportunities for improvement and success might be even greater with uninterrupted access to second-generation or newer TKIs.