

Chronic myeloid leukemia in India: The poster child of translational medicine needs help!

In this issue of SAJC, Dr. Raut *et al.* present a single center retrospective analysis of 13 pediatric patients with a diagnosis of chronic myelogenous leukemia (CML).^[1]

Soon after its discovery, Imatinib made a rapid shift from bench to bedside monopolizing the therapeutic algorithm for patients with CML. The resounding success of this tyrosine kinase inhibitor in the front line management of these patients won imatinib the title of “poster child of translational medicine,” an honor richly deserved!

In recent epidemiological data, the survival of younger patients treated with imatinib is within 10-20% of the life expectancy of age-matched peers.^[2]

However, this global success story might be eclipsed in certain pockets of the world due to economic constraints.

I shall briefly review this clinical analysis from eastern India, both from a clinical and a social perspective.

Clinical Response

CML is composed of 3% of pediatric leukemia's, making evidence based recommendations difficult.^[3] Although, adopting adult clinical experience to guide therapeutic decision making in children is deemed reasonable, the issues of drug formulation, pharmacokinetics, adolescent compliance and precise role of transplantation in this cohort merit clinical investigation.

Upfront transplantation with a fully matched donor might still be a viable option in developing countries because of cost of lifelong imatinib and effects of imatinib on growth delay. None of the 13 children in this series underwent a stem cell transplant and despite that the estimated overall survival and progression free survival was 84% and 100%, respectively. The effect of imatinib on growth was not assessed in this study.

The clinical and laboratory variables of this study population are comparable to other trials published by the Children's Oncology group and the French National Phase 4 trial.^[4,5] The finding that none of these young patients reported low-grade fever as opposed to 76% of adults experiencing pyrexia's is interesting. The unfortunate death of one child with tuberculous meningitis after achieving hematological response will prove intriguing to the western world.

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Social Response

The most striking feature of this analysis is the disparity between CML practices between the western and the developing world. Karyotyping and BCR-ABL RT-PCR (reverse transcriptase-polymerase chain reaction) monitoring in a timely fashion as suggested by the European leukemia net guidelines would be considered as “standard of care” for these patients. However, the fact that some of the patients in this study could not have these done at all and some with significant delays echoes the need for more financial investment in health-care in this sector of eastern India.

Two other harrowing facts that should humble the scientific and clinical fraternity are that hydroxycarbamide had to be continued in patients who could not afford imatinib and the patient presenting with blast crisis who could not be treated optimally due to the financial constraints.

The National Health Service available to all citizens in UK works on the principle that health is a human right rather than a luxury dictated by the depth of one's pocket. Significantly more efforts need to be made by national and international health organizations to improve the standard of care of these patients belonging to the low socio-economic strata.

Concluding Remark

I salute the tireless effort of Dr. Raut's team in treating this pediatric CML population beyond the best of their ability despite the trying fiscal challenges.

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