

# CHRONIC MYELOID LEUKEMIA IN CHILDREN AND YOUNG ADULTS IN TUNISIA

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April 13, 2023

## Abstract

Chronic myeloid leukemia (CML) in childhood is rare accounting for less than 10 % of all cases of CML and less than 3% of all pediatric leukemia. We conducted a retrospective study of children and young adults (CYA) with CML diagnosed in Tunisia from June 2003 through December 2022. Diagnosis of CML was confirmed by RT-PCR for all patients. Data were analyzed regarding epidemiological characteristics, clinical presentations, molecular findings, treatment response and side effects of Tyrosine kinase inhibitors (TKI). Of the 1876 patients diagnosed with CML during this period 61 (3.25%) were under 18 years. 37 were male and 24 were female. The chronic phase (CP) was the most common phase of CML seen in 43 patients. While 9 patients were in accelerated phase (AP) and 9 had inaugural blast crisis. Mean white blood cell count were  $232 \times 10^9$  /L. All patients were positive for bcr-abl transcript : 32 patients had b2a2, 25 had b3a2. They were given oral TKI. Only 5 patients underwent hematopoietic stem cell transplantation. 51 achieved complete hematologic remission on imatinib. 27 patients achieved major molecular remission and 13 are currently maintaining a bcr-abl ratio under 0.01% which corresponds to MR<sup>4.5</sup> ,6 patients progressed under TKI within 7 months. This retrospective study represents the first series of CYA with CML in Africa. Our data are comparable with the literature findings regarding epidemiological characteristic, clinical presentations, and response to TKI.

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