

Real-World Data on Clinical Profile, Treatment Strategies, and Feto-Maternal Outcomes of Pregnancies Among Patients with Chronic Myeloid Leukemia in a Resource-Constrained Setting

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INTRODUCTION

Pregnancy in chronic myeloid leukemia (CML) poses unique challenges because interruption of tyrosine kinase inhibitors (TKI) may compromise disease control. Data from resource-limited settings remain scarce, limiting evidence-based management where access to specialized monitoring and pregnancy-compatible therapies is constrained.

AIM

This study to evaluate clinical characteristics, management, and maternal–fetal outcomes of CML pregnancies in a resource-limited setting.

METHOD

- We conducted a 5-year retrospective study of pregnancies among women with CML at tertiary referral center in resource-limited setting.
- Clinical characteristics, treatment patterns, hematologic and molecular responses, and maternal and neonatal outcomes were evaluated.

CONCLUSIONS

Pregnancy in CML was associated with favorable fetal outcomes but frequent maternal disease destabilization, highlighting the impact of limited molecular monitoring and restricted access to pregnancy-compatible therapies. Resource-adapted care, including simplified monitoring, improved access to interferon, and multidisciplinary reproductive planning, is needed to optimize maternal and fetal outcomes.

RESULTS

Twenty-six pregnancies resulted in 27 fetal outcomes, including one twin gestation. All patients were in chronic phase at conception; **59.1% had achieved major molecular response or deeper**, and **70.0% were in complete hematologic response (CHR)**.

Most pregnancies were unplanned, with 75.0% discontinuing TKI therapy after conception. During pregnancy, **CHR declined to 23.5%**, mean white blood cell count peaked at **95.82×10⁹/L**, and **molecular monitoring was performed in only 25.0%** of patients.

Management was predominantly expectant, with **59.1% receiving no active therapy**, **36.3% hydroxyurea**, and **4.5% interferon-α**. At follow-up, CHR recovered to 50.0%; however, **two patients (11.1%) progressed to blast phase**. No maternal deaths or congenital anomalies occurred. Live birth was achieved in 85.2%, although **preterm delivery (45.8%)** and **low birth weight (25.0%)** remained common.



Figure 1. Longitudinal hematologic response trajectory among pregnant patients with chronic myeloid leukemia. Abbreviations: CHR, complete hematologic response; Loss, loss of hematologic response.

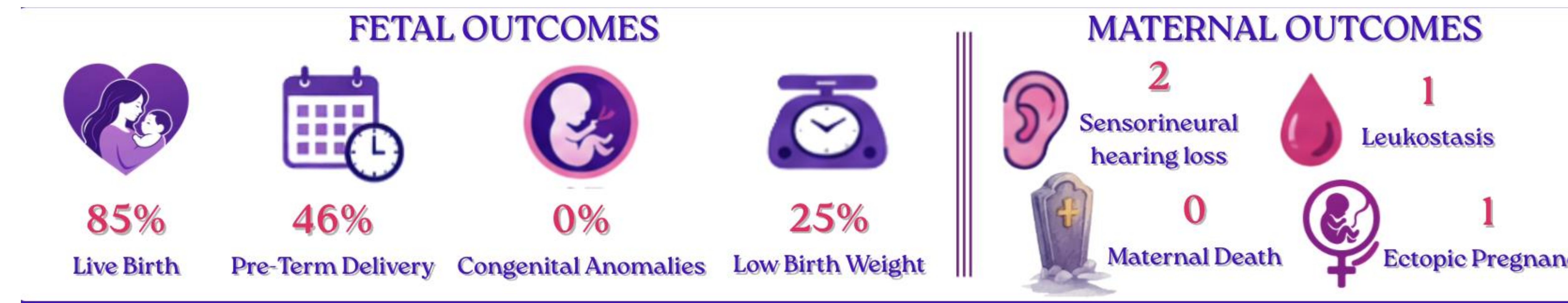


Figure 2. Feto-maternal outcomes among pregnant patients with chronic myeloid leukemia.

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