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Discontinuation of imatinib after long term complete molecular response in patients with chronic myeloid leukemia diagnosed at late chronic phase

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Imatinib is the first line therapy in chronic myeloid leukemia (CML) patients. It induces complete cytogenetic response (CCyR) to 75-90% of patients in early chronic phase [1]. Discontinuation is more and more offered as an option for prolonged complete molecular response (CMR) in patients diagnosed in early chronic phase [2, 3]. CML affects in Sub Saharan Africa a young population in reproductive age with desire of pregnancy. As imatinib is not indicated in pregnancy, imatinib discontinuation should be considered as a good therapeutic option for male and female patients in a desire of childbearing. However, would imatinib discontinuation an option for patients diagnosed in late chronic phase (CP) that achieve prolong complete molecular response?

We report the case of two patients that achieved respectively long term CCyr and long term CMR during a median of time of 71 months and relapsed shortly after discontinuation of the imatinib.

The first patient is a 24 years old woman diagnosed with late CP CML and high Sokal score at the age of 18. Imatinib was started at the dosage at 400mg daily. She achieved complete hematological response in 1 month (CHR), CCYr at 9 months and CMR at 12 months of therapy. She maintained them during 6 years (the molecular response was monitored every two years). At the age of 24, because she was pregnant; she decided on her own to discontinue the treatment and was loss of follow during 8 months. She came back to the hospital 8 months later with an enlarged spleen, major leukocytosis at 53G/L and slight anemia at 10g/dL.

The second patient is a 34 years old male that was diagnosed with late CP CML and high Sokal score. On imatinib at 400 mg daily, he achieved CHR at 2 months of therapy, CCYr at 8 months and CMR at 14 months. The patient was stable on imatinib during 8 years. Because he faced infertility issues that were for him related to the imatinib; he discontinued the imatinib and was loss of follow. He showed up 12 months later with enlarge spleen, loss a CHR, a leukocytosis at 98G/L and deep anemia at 7g/dl of hemoglobin.

Imatinib can be discontinued in patients exhibiting a prolonged complete molecular response [2]. For patients with CML and CCyR, it is clear now that prolonged CMR improves overtime [4]. However prolonged CMR is not the only

criterion to indicate a discontinuation. These two cases suggest that discontinuation is not an option for patients that are diagnosed at late stage and have a high Sokal score. Indeed, despite long term CHR and CMR, relapses occurred rapidly after the imatinib discontinuation. The recurrence was linked to the cessation of the treatment since both of the patients attained again CHR when they restarted the imatinib, suggesting no resistance to the imatinib.

In such way, despite long term CMR, imatinib discontinuation should be examined carefully on patients with high Sokal score that were diagnosed at late CP.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interests regarding the publication of this paper.

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