Cardiovascular Events After exposure to Nilotinib in Chronic Myeloid Leukemia: A Single Institution Study, Long term follow up.

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Objectives:

To evaluate the incidence of peripheral arterial disease (PAD) and cardiovascular events (CVEs) in chronic myeloid leukemia (CML) patients with previous exposure to Nilotinib.

Methods:

We evaluated the incidence of PAD and other CVEs in 55 CML patients treated at our institution with Nilotinib. All patients were treated and currently followed at our institution. Patients without previous history of PAD underwent screening with Doppler ultrasound and measurement of Ankle/Brachial Index (ABI).

Results:

55 patients, 32 males and 23 females, were included .61% of patients had hypertension, 22% were diabetic, 36%had history of smoking and 59% had Dyslipidemia (DLP).55% of patients were on 1 medication for DLP with a mean LDL cholesterol of 2.34 (0.7-4.34) . Following median exposure time of 53 months (5-112) to Nilotinib, 2 patients (3.63%) developed PAD, 2 patients (3.6%) acute coronary syndrome and 2 patients (3.6%) chest pain with angiographically proven CAD but nonsignificant lesions.

There was no episode of stroke. Both cases of PAD were 75 years old at the time of event and were ex-smokers and had hypertension .Acute coronary syndrome happened in 2 patients with intermediate and high Framingham risk score of 11.4 and 21.86 and with mean duration of exposure to Nilotinib of 49 and 11 months, respectively. One patient with previous acute coronary syndrome is still on Nilotinib, without further CV events, 4 years after the first event. Routine screening of patients with Arterial Doppler's revealed only one patient with abnormal ABI.

Conclusion:

Contrary to recent published data, the incidence of PAD and CVEs in CML patients with exposure to Nilotinib is low. It appeared that CVEs in this cohort of patients were associated with cardiovascular risk factors. Aggressive CV risk factor modification in these patients and applying standard definitions for measuring cardiovascular outcomes in this study, might have contributed to the result. Further prospective and adequately powered studies are needed to explore the effect of cardiovascular risk profile on CVEs in CML patients on Nilotinib.