

A Rare Adverse Drug Reaction of Imatinib Mesylate

Chronic myelogenous leukemia (CML) also known as chronic granulocytic leukemia, is characterized by the increased and unregulated growth of predominantly myeloid cells in the bone marrow and the accumulation of these cells in the blood. The standard treatment for chronic phase (CP) CML is a tyrosine kinase inhibitor such as imatinib, nilotinib, or dasatinib.^[1]

The documented adverse effects of imatinib mesylate are nausea, vomiting, edema, tumor necrosis, muscle cramps, hematologic side effects, cardiovascular side effects, hepatic side effects, nephrotoxicity, and dermatologic side effects such as skin rash, pruritus, and petechiae. This case study is a rare adverse effect seen with imatinib mesylate, which has not been reported so far.

A 45-year-old postmenopausal female came to the outpatient department with the complaints of upper abdominal pain and weight loss of 2 months duration. On examination, she had splenomegaly (4 cm size from the costal margin). Complete blood examination showed increased leukocyte count including mature myeloid cells and myeloid precursors [Figure 1]. fluorescent *in situ* hybridization revealed the presence of philadelphia chromosome [t(9;22)]. She was diagnosed with a case of CML-CP and was started on imatinib mesylate 400 mg once daily orally.

After 5 months of treatment with imatinib mesylate, the patient symptomatically improved. Blood examination showed white blood cell count $<10,000$ cells/mm³ and a differential count showed no blast cells. Cytogenetics revealed Ph+0. Hence, the patient was deemed as complete clinical and pathological response. Nevertheless, the patient

developed painful swelling of the digits of the upper limb which was diagnosed with dactylitis [Figure 2]. The patient was treated with oral and topical corticosteroids, and imatinib mesylate was withheld until the reaction subsided.

Dactylitis has not been reported as an adverse effect of imatinib mesylate in the literature. This is one of the rarest adverse effects of imatinib mesylate. Based on Naranjo causality assessment scale, the adverse drug reaction (ADR) is categorized as possible.^[2] The occurrence of ADRs causing loss of working days to the patient, which in turn is a loss to the community and the nation, is preventable. This case report also emphasizes that physicians should be aware of the occurrence of dactylitis with imatinib mesylate therapy. Since rational prescribing is a part of doctor ethics, awareness of such rare ADRs will enable the physicians to safely administer drugs to the patient community. In addition, the patients should be informed of such rare ADRs, to prevent further events. Reporting of ADRs should be encouraged among health professionals.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

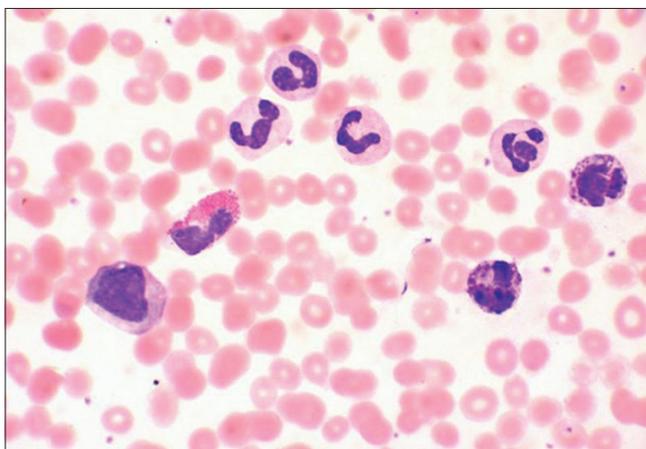


Figure 1: Peripheral blood smear of the patient showing myeloid precursor cells



Figure 2: Inflammation of the digits (dactylitis) involving the patient's hands

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Conflicts of interest

There are no conflicts of interest.

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