Imatinib associated generalized exfoliation and scaly cutaneous lesions with facial predominance

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Received: May 22, 2023
Accepted: Jun 07, 2023
Published: Jun 14, 2023
Archived: www.jcimcr.org
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DOI: www.doi.org/10.52768/2766-7820/2456

Keywords: Imatinib; Exfoliation; Cutaneous side effects.

Case presentation

We report the case of a 62-year-old female patient who presented to us with complaints of low grade fever, fatigue and left upper abdomen discomfort. Her routine physical examination was unremarkable except for splenomegaly 5 cm below costal margin. Her blood profile showed a WBC count of 122,740/mm$^3$ with left shift and 1% blast, hemoglobin was 11.3 gm/dL, hematocrit was 34.1% and platelet count was 163,000/mm$^3$. A battery of investigations were done on the suspicion of chronic myeloid leukemia. Bone marrow was found to be hypercellular and myeloid hyperplasia with 2% blasts. The Philadelphia chromosome was positive on cytogenetics and BCR-ABL P210 transcript (43.336%) was detected. Patient was diagnosed as chronic myeloid leukemia-chronic phase (CML-CP) and was put on imatinib mesylate 400 mg daily in August 2021. Her ELTS score was calculated to be 1.7808 placing her in intermediate risk group. Patient showed complete hematologic response after 1 month of therapy and at 3 months, her BCR-ABL P210 transcript was seen to be at 8.592%. Although, 5 months in on imatinib therapy, the patient reported one day with generalized itching, dryness and scaling of skin. On examination she was seen to have exfoliating, pruritic and scaly rashes all over body with predominance on face (Figure 1).

Patient told that the symptoms had started a month ago and kept on increasing in severity, thus forcing the patient to finally report for the same. Considering that cutaneous side effects of imatinib are a documented entity, we suspected the same pathogenesis in this case and decided to replace imatinib with generic dasatinib 100 mg/day.

For the skin lesion topical corticosteroids along with an oral antihistaminic were given. Her pruritus resolved and skin lesions improved in the following months and she is doing well on dasatinib 100 mg, having achieved major molecular response one year after onset of therapy (BCR-ABL P210 transcript - 0.046%). Chronic Myeloid Leukemia (CML) is a chronic myeloproliferative neoplasm defined by the presence of a chimeric gene, BCR:
ABL. This is the philadelphia chromosome, and it is correctly annotated t(9;22)(q34.1;q11.21) [1].

Imatinib mesylate is a tyrosine kinase inhibitor and is commonly used in the treatment of CML-CP. Cutaneous reactions to imatinib are common and are seen soon enough after start of therapy, but there is no documented time frame to it. Maculopapular eruptions, edema, erythematous eruptions, and periorbital edema are the most common adverse events observed. Imatinib can also induce severe skin and generalized skin eruptions [2].

The usual modus operandi in such manifestations is replacement of imatinib with another tyrosine kinase inhibitor, like dasatinib in our case and administer corticosteroids and antihistamines to treat the cutaneous reaction that has developed.

![Figure 1: Exfoliating and scaly rash on face.](image)