

# Gefitinib-induced skin ulceration in metastatic adenocarcinoma lung

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## ABSTRACT

We report a case of gefitinib-induced skin ulceration in a 50-year-old female with metastatic adenocarcinoma of lung who developed this adverse effect 2 weeks following initiation of gefitinib at a dose of 250 mg/day. The ulcer improved with stopping gefitinib for 2 weeks and also addition of topical steroids and antibiotics. We are reporting this case to create awareness among treating oncologists of this adverse effect and also prompt interruption of therapy and topical steroids/antibiotics is useful to treat this adverse event.

**Key words:** Epidermal growth factor receptor, gefitinib, skin ulceration, tyrosine kinase inhibitor

## INTRODUCTION

The Epidermal growth factor receptor (EGFR) is over expressed in various solid malignancies including non small cell lung cancer (NSCLC). Hence EGFR inhibitors - gefitinib and erlotinib are used in advanced NSCLC. However, they are associated with a dermatologic side effects, which can occasionally be responsible for discontinuation of the EGFR inhibitors. Hence, we report a case of metastatic adenocarcinoma of lung who developed skin ulceration with gefitinib and responded to interruption of the drug and early intervention.

## CASE REPORT

The present case report is about a 50-year-old female patient who had been diagnosed as having lung adenocarcinoma with multiple bone metastases was initiated on gefitinib therapy at an oral dose of 250 mg/d. She had a positive epidermal growth factor receptor (EGFR) mutation status. After 2 weeks of initiating therapy, the patient presented

with ulcer over the palm [Figure 1]. The ulcers improved with stopping gefitinib for 2 weeks and also with the addition of topical steroids and antibiotics.

## DISCUSSION

Non-small-cell lung cancer (NSCLC) with sensitive mutations of the EGFR is highly responsive to gefitinib. Gefitinib is a small molecule tyrosine kinase inhibitor (TKI) of EGFR.<sup>[1]</sup> Since 2004, it was clear that a substantial proportion of NSCLC obtaining objective response when treated with gefitinib harboring activating



**Figure 1:** Ulcer over the palm with granulation tissue in a woman on gefitinib

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mutations in the EGFR gene.<sup>[2]</sup> The occurrence of skin disorders (dry skin and acneiform rash) is explained by the fact that EGFR is also expressed in the basal layer of the skin; inhibition of the receptor will disturb normal biology and result in skin rash.<sup>[3,4]</sup> Skin rash is notorious as an adverse event of EGFR-TKI and is noted in up to two-thirds of patients receiving any of these agents although severe in only 5-10% who can develop pyogenic granuloma like lesions. Very rarely the cutaneous inflammation is so pronounced that skin necrosis with black eschar formation and ulceration is seen.<sup>[5]</sup> The cutaneous side-effects are treated with topical steroids and antibiotics with interruption of treatment for 2-4 weeks as in our case. Our patient responded to the above treatment with break in treatment for 2 weeks.<sup>[6]</sup>

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