INTRODUCTION

Gefitinib is a small molecule tyrosine kinase inhibitor of epidermal growth factor receptor (EGFR). It has several oncologic indications but most widely usage is limited to first-line usage in metastatic nonsmall cell carcinoma patients who are found to have sensitive EGFR mutation on biopsy blocks. Although generally well tolerated, several side effects of this drug such as diarrhea and transaminitis are troublesome whereas some like skin itching, heartburn, and mild fatigue are easily manageable. Trichomegaly as a side effect of gefitinib therapy is one such adverse effect that can be easily managed with only regular trimming of eyelashes to prevent any corneal trauma and there is no need of dose modification or treatment interruption. This report describes one such case of metastatic adenocarcinoma lung patient who developed eyelashes trichomegaly while on gefitinib therapy.

CASE REPORT

A 52-year-old female presented with complaints of cough and progressively increasing dyspnea of 2 months duration in November 2016. Her evaluation revealed positron emission tomography (PET) scan showing left lung mass with left-sided pleural effusion and multiple lytic bone and liver metastasis. Biopsy from left lung mass was suggestive of metastatic adenocarcinoma and immunohistochemistry (IHC) revealed CK7+, CK20−, and TTF1+. Based on clinical presentation and biopsy with IHC report, she was diagnosed as a case of metastatic adenocarcinoma of lung and EGFR and anaplastic lymphoma kinase analysis was requested. Her final report of EGFR mutation analysis revealed deletion 19 positivity. In view of metastatic disease and EGFR mutation being positive, she was started on gefitinib 250 mg once
daily continuously with injection zoledronic acid 4 mg intravenous every 3 weekly in view of lytic bony metastasis. Patient tolerated treatment well without any significant toxic effect and showed very good clinical response to treatment. At 3 months, revaluation with PET scan revealed a good partial response to treatment with resolution of bony metastasis and significant decrease in size and metabolic activity of lung lesion and liver nodules. In view of good treatment response, she was continued on same treatment schedule. However, during routine follow-up visit, on clinical examination, she was found to have enlarged eyelashes which were not noticed by her [Figure 1]. She denied any history of diarrhea, skin rash, eyeball redness, or excessive lacrimation. A thorough dermatological examination revealed the absence of any skin rashes. In view of ongoing treatment response and absence of other toxic features, she was advised to continue her regular treatment with regular monthly trimming of eyelashes.

**DISCUSSION**

Eyelash trichomegaly is defined as increase in length (12 mm or more), curling, pigmentation, or thickness of eyelashes.[1] It can be congenital or acquired. Acquired causes of trichomegaly include not only chronic illness such as HIV infection, dermatomyositis, systemic lupus erythematosus, and hypothyroidism but also malignancies such as metastatic renal adenocarcinoma.[2-4] Several other drugs previously described in literature as causing trichomegaly include cyclosporine, latanoprost, interferon alpha-2b, phenytoin, acetazolamide, and topiramate.[5] Contrary to classical chemotherapeutic drugs which causes alopecia, targeted therapies such as anti-EGFR has been more correlated with the occurrence of trichomegaly which is although rare.

Anti-EGFR therapy forms the backbone of treatment in various malignancies such as lung cancer, particularly nonsmall cell lung carcinoma, pancreatic cancer, and even in head and neck malignancies after several lines of chemotherapy. There are two forms of anti-EGFR therapy - (1) monoclonal antibodies that block the EGFR receptor itself (cetuximab and panitumumab) and (2) small molecule that inhibits receptor activation by virtue of their antityrosine kinase activity (erlotinib, gefitinib, and afatinib). Apart from tumor tissue, EGFR is also located on keratinocytes, hair follicle, and sweat glands.[6] As a result of this, acneiform skin rashes, pruritus, xerosis, paronychia, and hair changes are frequent side effects of anti-EGFR therapy. However, enlargement of eyelashes categorically is very rare and described in literature with both classes of drugs only in few case reports.[7,8] Trichomegaly of eyelashes due to EGFR inhibitors is usually seen after 2–5 months of treatment and can be associated with hypertrichosis in other areas; however, this is not the rule.[9]

While other common toxicities such as diarrhea or transaminitis may require dose modification or even treatment interruption in severe cases, cutaneous toxicities rarely require and treatment modification. Correlation of occurrence of skin rash with treatment response has been well documented[10] but whether such hypothesis will prove true with the occurrence of trichomegaly is still not proven. This untoward side effect is usually incidentally diagnosed and patient is asymptomatic with this. It does not require any dosage modification or treatment interruption but sometimes can lead to severe complications such as development of corneal ulcer due to corneal trauma from enlarged lashes. Thus, knowledge of this unusual side effect can enable onco physician to advise monthly trimming with scissors in those who develop this side effect. Even in previously such reported cases, drug was continued in view of good clinical response and regular trimming advised.[11]

**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.

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**Conflicts of interest**

There are no conflicts of interest.
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