



**Figure 1** Left foot with purple discoloration due to warfarin.

recent hypotheses focus on the potential role of cholesterol crystal microembolization in small blood vessels.<sup>5</sup> Some investigators have suggested that warfarin disrupts healing in ulcerated atherosclerotic plaques with release of cholesterol fragments. As a consequence, dermal arterioles are occluded, producing ischaemic infarction of the epidermis with local oxygen desaturation of blood and concomitant cyanosis.<sup>3</sup>

Despite the lack of apparent sequelae following our patient's knee surgery, we consider that there could be subclinical impairment of venous/lymphatic outflow from her left lower leg, which might explain the unilateral distribution of the phenomenon in this case. It may also favour a direct toxic aetiology for warfarin-induced purple toes, as local surgery is unlikely to affect cholesterol crystal microembolization.

Management of the disorder involves withdrawal of warfarin, although this may not always be possible due to the presence of various risk factors. In conclusion, we report a rare adverse manifestation of warfarin therapy, purple toes syndrome, and to our knowledge, this is the first reported case of unilateral involvement associated with warfarin.

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## Rare cutaneous side-effect of gefitinib masquerading as superficial dermatophytosis

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Gefitinib is an oral form of epidermal growth factor receptor (EGFR)–tyrosine kinase inhibitor that has been approved for the management of adenocarcinomas and head and neck malignancies.<sup>1</sup> This kind of molecular targeted therapy has been associated with many cutaneous side-effects.<sup>3</sup> We report two patients with a late-onset cutaneous adverse reaction to gefitinib mimicking superficial dermatophytosis.

Patient 1 was a 57-year-old woman with stage IV non-small-cell lung cancer (NSCLC), who had taken gefitinib (250 mg orally once daily) for 6 months. She presented with a 1-month history of an itchy skin rash that had developed on the anogenital area and inner thighs (Fig. 1a,b). Initially, a diagnosis of tinea cruris was considered. A potassium hydroxide preparation was made but did not detect any fungal elements. Histological examination of a diagnostic incisional skin biopsy showed findings of vacuolar dermatitis with dense perivascular lymphocytic and eosinophilic infiltration. A cutaneous reaction to gefitinib was diagnosed. The skin rash resolved in response to topical steroid (0.05% fluocinonide acetone) (Fig. 1c,d).

Patient 2 was a 60-year-old woman with stage IV NSCLC, who had been treated with a therapeutic programme of gefitinib (250 mg orally once daily) for 8 months. She was referred for dermatological consultation to evaluate a 2-week history of diffuse itchy scalp lesions, hair loss (Fig. 2a,b), and painful erythematous swellings on the fingers and toes. A tissue biopsy was taken from the scalp lesions. The specimen showed interface dermatitis with infiltration of predominantly lymphocytes and

eosinophils. No fungal elements were found by periodic-acid-Schiff staining, and no microorganisms were found in tissue cultures. A diagnosis of infectious folliculitis of the scalp was excluded. A cutaneous reaction to gefitinib was diagnosed. Paronychia with granulated tissue was successfully treated with electrodesiccation and topical antibiotic cream. The scalp lesions responded satisfactory to a tar-based shampoo (Polytar<sup>®</sup>, Stiefel Laboratories (Ireland) Pty. Limited, Sligo, Ireland) along with 0.05% fluocinonide acetone lotion (Fig. 2 c,d).

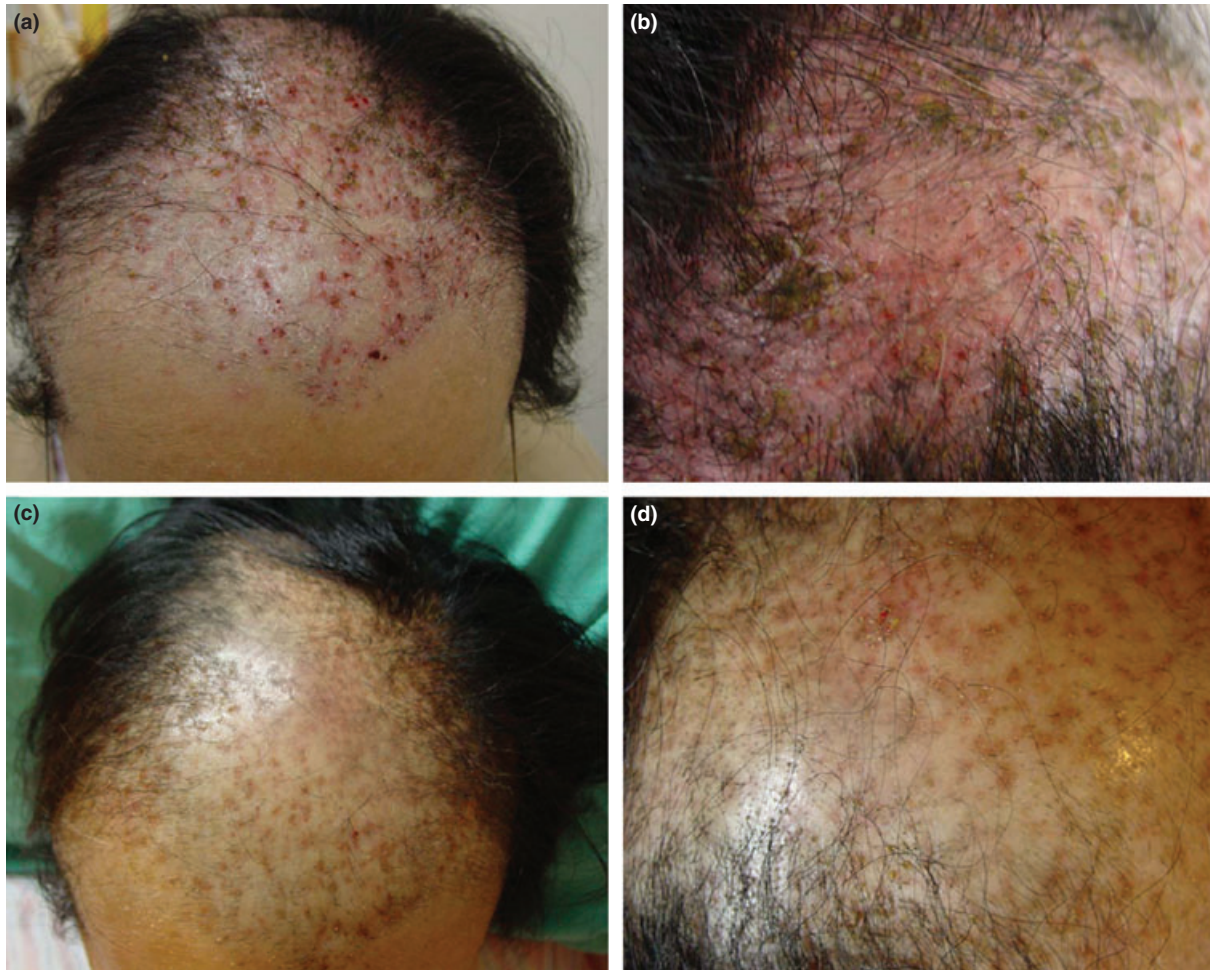
EGFRs are mainly expressed in basal keratinocytes, sweat glands and the follicular epithelium. The possible mechanism of these cutaneous reactions may be related to the roles of EGFRs in cell differentiation, proliferation, migration, angiogenesis and apoptosis.<sup>2</sup> Some studies have shown a positive correlation between the incidence of cutaneous side-effects and the dosages and with favourable survival rates.<sup>3</sup> Hence, it is not necessary to

stop gefitinib treatment while managing these side-effects. Both our patients had favourable responses to treatment without the need to cease gefitinib. In comparison with previous reports, the late onset of both cutaneous side-effects is uncommon and the variable presentations could lead to misdiagnoses. In our second patient, alopecia with diffuse crusted papules and plaques on the scalp as an unusual presentation of the drug has rarely been reported.<sup>4</sup>

In summary, as EGFR inhibitors are increasingly used in solid malignancies, it is important for dermatologists to properly assess and differentiate their cutaneous adverse effects from other diseases that they may mimic, especially when the side-effect occurs late in the course of treatment. In addition, we observed a satisfactory response to coal-tar derivatives on the scalp lesions, which has to our knowledge not been reported previously for the management of such lesions.



**Figure 1** (a, b) Well-demarcated, symmetric, annular, erythematous plaques with scales developed on the anogenital area and inner thighs. (c, d) Both areas showed improvement in the skin lesions after using topical steroid for 1 week.



**Figure 2** (a) Alopecic plaque with extensive, erythematous follicular papules surmounted by scales and crusts. (b) In a close-up view, black dots and broken hair can easily be seen. (c, d) After 2 weeks of treatment, the scalp showed postinflammatory hyperpigmentation.

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## Subungual pyoderma gangrenosum complicated by myopathy induced by ciclosporin and tacrolimus

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We report a case of subungual pyoderma gangrenosum (PG), which was challenging for both diagnosis and management. PG, an inflammatory ulcerative condition