A 76-year-old, female, non-smoker developed all the spectrum of dermatological reactions 2 months after receiving erlotinib (150 mg daily) for advanced non-small cell lung cancer and known epidermal growth-factor receptor (EGFR) mutation. Her face had a papulopustular rash with erythematous and dry skin; trichomegaly (elongation and curling of the eyelashes), blepharitis and fine and brittle hair were also seen (Figure 1); finally, there was also periungual inflammation with onychodystrophy and onycholysis on the nails of her right second and third finger (inset, arrows).

After topical care and reduction of erlotinib (100 mg daily) the cutaneous lesions gradually improved.
EGFR in the skin play a crucial role in the normal development and physiology of the epidermis; moreover it is often overexpressed or dysregulated in solid tumours. Two main classes of anticancer agents inhibit the EGFR: the monoclonal chimeric antibodies cetuximab and panitumumab, and the tyrosine kinase inhibitors gefitinib and erlotinib. These drugs inhibit the process involved in tumour growth and progression, including proliferation, apoptosis, metastasis and angiogenesis. Currently, they are approved in non-small cell lung cancer, pancreatic cancer, colorectal cancer, and head and neck cancer. The most common adverse drug reactions associated with EGFR inhibitors are dermatological and include rash, xerosis, scaling, trichomegaly and paronychia; they are typically seen in more than 60% of patients taking these drugs. The toxicity is related to the keratinocyte growth arrest and apoptosis, decreased cell migration, increased cell attachment and premature differentiation. Even though the skin reactions may cause significant physical and psycho-social discomfort, the incidence and severity of cutaneous side effects are associated with improved clinical efficacy. For this reason, patients should be encouraged to follow the physician’s advice regarding the treatment of dermatological side-effects. The active intervention at the first signs of skin toxicity is key to successful management.

Conflict of interest: None declared.

References