Dear Editor,

Several variants of fixed drug eruptions (FDEs) have been defined based on their morphological–clinical features. These include pigmenting, generalized, linear, wandering, non-pigmenting, bullous, urticarial, erythema dyschromicum perstans-like, oral, and, psoriasisform FDE, and vulvitis.1 Fluoroquinolone-induced FDEs reported in the literature are usually localized FDEs.2,3 Nonbullous generalized FDE following treatment with ciprofloxacin and levofloxacin and a few cases of generalized bullous FDE (GBDFE) after ciprofloxacin intake have also been reported.4–6 Here we present a case of GBFDE caused by levofloxacin.

An 87-year-old man who had been treated for chronic obstructive pulmonary disease with bronchodilators for 20 years was referred to our outpatient clinic for evaluation of an eruption of 4 days’ duration. He had been treated with levofloxacin 500 mg tablet, 5 days previously due to the exacerbation of chronic obstructive pulmonary disease and acute bronchitis. He had not received any other medications for exacerbation. He began itching over the back and legs followed by a burning sensation and subsequent development of a few fluid filled purplish lesions. Multiple erythematous pigmented patches and a few bullous eruptions on the back and gluteal region had developed 1 day after the first parenteral intake of levofloxacin. He did not have erosions over the lips and buccal mucosa. He had a preceding history of a similar but less severe bullous reaction after taking the same drug in the same locations 4 months previously. There was no history of any other oral drug intake. On physical examination purplish, dusky erythematous patches and a few bullae were seen on the back and left gluteal region. Pseudo-Nikolsky’s sign was positive on the pigmented areas (Figure 1). His vital signs were within normal limits.

The patient was hospitalized with the differential diagnosis of generalized bullous drug eruption, bullous pemphigoid, and Stevens–Johnson syndrome. Histopathological examination from a droopy bulla showed necrotic keratinocytes in the epidermis, subepidermal clefing, perivascular mixed inflammatory infiltrate containing eosinophils, and prominent pigment incontinence in the dermis. There were no immunoreactants along the basement membrane zone by direct immunofluorescence. Laboratory examination revealed a leukocyte count of 8.5 × 10^9/L with mild eosinophilia. Biochemical profiles showed renal dysfunction with high values of serum creatinine, 1.35 mg/dL (normal 0.7–1.2 mg/dL) and blood urea nitrogen, 25 mg/dL (normal 6–20 mg/dL). C-reactive protein was 56.27 mg/dL (normal < 5 mg/dL), sedimentation rate was 46 mm/h (normal < 20 mm/h) and other values were within normal limits.

Based on the clinical and histological course, the diagnosis of GBFDE due to levofloxacin was made. A short course of topical betamethasone 17–propionate balm therapy was given to the patient. All lesions recovered thoroughly in 2 weeks by leaving residual hyperpigmentation of the involved skin sites.

In FDE, lesions recur at the same sites or may increase when the offending drug is re-administered and rarely advances to GBFDE. GBFDE begins within hours after the drug intake.7 GBFDE is characterized by extensive blisters and erosions on the whole body in addition to typical FDE reactions.8 In GBFDE, mucosal involvement is usually absent or less and the clinical course is favorable with rapid resolution after drug discontinuation.9 However, the prognosis of GBFDE may be unfavorable in older patients, particularly in those with comorbidities.3

GBFDE may be mistaken clinically or histopathologically for Stevens–Johnson syndrome/toxic epidermal necrolysis, but it is reported that, clinically, GBFDE has shorter latent term and less mucosal containment, and, histopathologically, has more eosinophil infiltration and more dermal melanophages.7 In our patient, history of previous less severe bullous reaction in the same locations, absence of mucosal involvement, lack of typical target lesions, absence of systemic involvement, fast healing with residual hyperpigmentation, relationship with the drug intake, typical histopathological findings were the clues for the diagnosis of GBFDE. The oral challenge test is the confirmative method for establishing the causative agent in FDE.5,6 However, our patient was very old, he had respiratory insufficiency, and his lesions were widespread and severe, so we did not want to increase the risk of complications by oral challenge test. The first step in the treatment is discontinuing the liable drug. Usually, systemic antihistamines and topical corticosteroids may be sufficient.5

In conclusion, we believe that clinicians must keep in mind that levofloxacin, which is a commonly prescribed antibiotic, may result in GBFDE. It can be misdiagnosed as other blistering diseases. It is important to make the true diagnosis of GBFDE, especially in elderly patients, to avoid unnecessary systemic steroid use.
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References


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Figure 1 (A) Multiple well-circumscribed, purplish-livid patches and eroded areas on the back and (B) close-up view of flaccid bullae and erosions on the left buttock.