

CONTACT POINT

A case report of fixed drug eruption caused by several drugs because of cross-reactivity and co-sensitization

Miriam Sobrino-García^{1,2} | Aída Gómez-Cardenosa¹  | Esther Moreno-Rodilla^{1,2,3} | Francisco J. Muñoz-Bellido^{1,2,3} | Milagros Lázaro-Sastre^{1,2,3} | Ignacio Dávila^{1,2,3}

¹Department of Allergy, University Hospital of Salamanca, Salamanca, Spain

²Institute for Biomedical Research of Salamanca, IBSAL, Salamanca, Spain

³Department of Biomedical and Diagnostic Sciences, University of Salamanca, Salamanca, Spain

Correspondence

Aída Gómez Cardenosa, Department of Allergy, University Hospital of Salamanca, Paseo San Vicente 58-182. 37007, Salamanca, Spain.

Email: aida.carde@gmail.com

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Fixed drug eruptions (FDEs) are cutaneous delayed hypersensitivity reactions triggered by a number of drugs. Both co-sensitization and cross-reactivity have been described.^{1–5} We present a case report of FDE caused by both cross-reactivity and co-sensitization.

patches 48 and 24 hours later. With levofloxacin, lesions appeared 12 hours after the administration of 62.5 mg. Drug challenges gave negative results with amoxicillin, ciprofloxacin, clarithromycin, and gentamicin. The patient declined a challenge with omeprazole.

CASE REPORT

A 73-year-old man had a biopsy of the prostate and received intramuscular gentamicin, and oral ciprofloxacin and omeprazole. Forty-eight hours later, he developed an erythematous and oedematous patch in the glans penis that evolved to a blister. Lesions resolved within 15 days after discontinuation of all drugs and application of a topical corticosteroid. Three months later, another biopsy of the prostate was taken, and the patient developed a new episode 48 hours after having received intramuscular gentamicin and oral amoxicillin-clavulanic acid, and omeprazole. When a third episode occurred, he was diagnosed with *Helicobacter pylori* infection, and started taking medication, including esomeprazole, amoxicillin, clarithromycin, and metronidazole. Fifteen days later, again for the treatment of *H. pylori* infection, he received amoxicillin, levofloxacin, and esomeprazole, and experienced the same reaction—always at the same skin site.

Patch tests with amoxicillin, amoxicillin-clavulanic acid, ciprofloxacin, gentamicin, omeprazole, esomeprazole and metronidazole were performed on healthy skin, as the patient refused genital patch testing. Readings were negative on day (D) 2 and D4. After informed written consent had been obtained, single-blind placebo-controlled oral/intramuscular challenges with at least 4-week intervals were performed. The dose was increased every hour until a therapeutic dose was reached. The challenge tests gave positive results after a full dose of metronidazole and esomeprazole, with reappearance of glans

DISCUSSION

Our patient developed an FDE that recurred several times, as shown by placebo-controlled drug challenges.⁶ We found 3 drugs to be involved (metronidazole, esomeprazole, and levofloxacin). Metronidazole and esomeprazole have in common an imidazole ring, so this could be a case of cross-reactivity. Cases of FDEs caused by cross-sensitivity resulting from the imidazole group have been described between metronidazole and ketoconazole¹ and between proton pump inhibitors.² Cases of FDE caused by fluoroquinolones have been reported.^{3,5} Cross-reactivity between them is high in type I hypersensitivity reactions,⁷ but variable in FDEs.^{3,5} In our case, the patient had an FDE with levofloxacin but tolerated ciprofloxacin. As fluoroquinolones do not have an imidazole ring, co-sensitization is likely in this case. Recently, a case report of FDEs caused by metronidazole and norfloxacin has been published.⁴ In conclusion, in patients with FDE caused by drugs containing an imidazole ring, it is important to take into account the possibility of cross-reactions with other drugs carrying an imidazole ring.

Conflict of interest

The authors declare no potential conflict of interests.

ORCID

Aída Gómez-Cardenosa  <http://orcid.org/0000-0001-5077-2509>

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