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Case Report

SDRIFE: symmetric intertriginous flexural exanthema related to ciprofloxacin and/or nitrofurantoin administration: a case report

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ABSTRACT

Symmetrical drug-related intertriginous and flexural exanthema (SDRIFE) is a self-limited cutaneous reaction induced by systemic drug exposure. It typically presents as sharply demarcated, symmetrical erythematous lesions affecting intertriginous areas such as the gluteal, perianal, and inguinal/perigenital regions, without systemic symptoms. Despite established diagnostic criteria, SDRIFE remains rarely reported, most often associated with antibiotics and less commonly with antifungals. We report the case of a 76-year-old woman with type 2 diabetes who developed SDRIFE after receiving ciprofloxacin and nitrofurantoin for a urinary tract infection. Treatment with corticosteroids led to marked clinical improvement. This case is of particular interest, as only one previous report has linked SDRIFE to ciprofloxacin, and none to nitrofurantoin. SDRIFE is believed to represent a type IV hypersensitivity reaction, most commonly triggered by beta-lactam antibiotics, though non-beta-lactams may also play a role. The clear temporal association between drug administration and symptom onset in our patient suggests a likely causal relationship. Given the limited documentation of SDRIFE associated with these agents, this case highlights the need to consider a broader range of potential drug triggers in patients presenting with this distinctive eruption.

Keywords: Symmetrical drug-related intertriginous and flexural exanthema, Ciprofloxacin, Nitrofurantoin, Drug eruption, Baboon syndrome, Perivascular lymphocytic infiltrate, Hypersensibility

INTRODUCTION

Symmetrical drug-related intertriginous and flexural exanthema (SDRIFE) is a rare, self-limited drug reaction characterized by sharply demarcated, symmetrical erythema affecting the gluteal, perianal, and inguinal/perigenital areas, typically in the absence of systemic symptoms.[1]

Initially referred to as "baboon syndrome," the term was later refined to avoid confusion with systemic contact dermatitis and is now defined by five clinical criteria systemic exposure to a drug, well-demarcated erythema in the genital, perianal, or inguinal/perigenital "V-shaped" region, involvement of at least one flexural fold, symmetrical affected areas, and absence of systemic symptoms.[2] SDRIFE has been most commonly associated with beta-lactam antibiotics, although cases involving non-beta-lactam agents, antifungals, and other systemic medications have also been reported.[1,3]

Despite increasingly well-defined diagnostic criteria, SDRIFE remains underreported, and its true incidence is likely underestimated.[3] We present a case involving a patient who developed SDRIFE after treatment with ciprofloxacin and nitrofurantoin two drugs with limited or no prior documented association with this condition

underscoring the importance of maintaining a broad differential when evaluating symmetrical intertriginous eruptions in the context of recent drug exposure.[4]

CASE REPORT

A 76-year-old female patient with a significant history of type 2 diabetes, managed with linagliptin and insulin lispro-protamine, was referred to dermatology with a 10-day history of redness and itching that began on the neck and progressively spread to the axillae, V of the neckline, arms, legs, genitals, groin, and gluteal region. She had previously applied clindamycin, ketoconazole/clindamycin, zinc oxide, dexpanthenol, and fluocinolone acetonide with clioquinol, without clinical improvement. On further questioning, she reported recent use of nitrofurantoin and ciprofloxacin for a urinary tract infection.

Physical examination revealed a bilateral, symmetrical, disseminated dermatosis involving the anterior trunk (V of the neckline), axillary folds, upper limbs (antecubital fossae), inguinal folds, intergluteal line, and popliteal fossae. The lesions consisted of erythematous plaques with fine whitish scaling and irregular yet well-defined borders. Laboratory testing revealed abnormal urinalysis as the only significant finding. Based on the clinical presentation, a diagnosis of SDRIFE secondary to ciprofloxacin and nitrofurantoin was made. Treatment with 20 mg of prednisone daily for two weeks was initiated, leading to complete resolution of the dermatosis at follow-up.

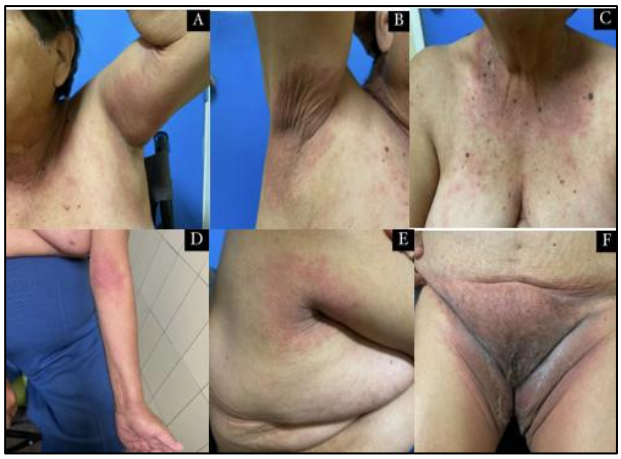

Figure 1. Clinical images of a 76-year-old woman diagnosed with symmetric drug-related intertriginous and flexural exanthema (SDRIFE). (A) An erythematous-squamous plaque affecting the left axillary region. (B) A similar lesion in the right axilla. (C) Erythema with fine scaling is observed in the décolletage area. (D) An erythematous-squamous plaque located in the right antecubital fold. (E) An erythematous-squamous plaque originating in the right axilla extends radially to the arm, trunk, and back. (F) A symmetrical erythematous-squamous plaque involving the inguinal and pubic regions.

DISCUSSION

According to Hausermann et al the term "baboon syndrome" was introduced in 1984 to describe erythematous skin eruptions in the gluteal region and chest after systemic exposure to allergens, initially reported in patients exposed to nickel, mercury, and ampicillin, later extending to antibiotic therapies.[1] However, the term was replaced by SDRIFE to avoid confusion with systemic contact dermatitis.[2] SDRIFE is a cutaneous reaction defined by the clinical criteria proposed by Hausermann et al Exposure to a drug, well-demarcated erythema in the gluteal or perianal area and/or V-shaped erythema in the inguinal/peri genital area, with involvement of at least one additional flexural fold, symmetrical distribution of affected areas, absence of systemic symptoms or signs.[1]

Histopathological features of SDRIFE are variable and nonspecific.[6] Most commonly, a mononuclear perivascular inflammatory infiltrate is described, sometimes accompanied by eosinophils and lymphocytes.[6] Additional features may include sub corneal and intradermal pustules, apoptotic keratinocytes, spongiosis, and papillary or vaculoar edema.[7] Although SDRIFE is infrequently reported, it appears more commonly in males (with a 3:1 male-to-female ratio) and typically affects middle-aged individuals.[5] In most cases, the condition is associated with antibiotic use, particularly beta-lactam antibiotics, and to a lesser extent, non-beta-lactam agents.[5]

Only one case linked to ciprofloxacin has been reported, and none to nitrofurantoin.[4] Nonetheless, given the temporal relationship between drug administration and rash onset in our patient, an association with both drugs cannot be ruled out. To identify the causative agent and confirm the diagnosis, drug provocation testing is typically required.[3] Once identified, management involves discontinuation of the offending drug and general supportive measures.[5] The condition is usually self-limited, resolving within one to two weeks, often followed by desquamation, post-inflammatory hyperpigmentation, and, in deeper cases, scarring.[3] In this case, corticosteroid therapy was used to reduce pruritus, and the patient showed favorable progression.

CONCLUSION

This paper presents the clinical case of a patient diagnosed with SDRIFE, a rare drug-induced cutaneous reaction characterized by symmetrical erythematous eruptions affecting intertriginous folds, the gluteal region, and perigenital areas, without systemic manifestations. While SDRIFE is most commonly linked to beta-lactam antibiotics, it has also been reported in association with non-beta-lactams, chemotherapeutic agents, and antihypertensives. However, certain drugs remain unreported as potential triggers. In this case, the reaction occurred following administration of ciprofloxacin and nitrofurantoin for a urinary tract infection. To date, only one case involving ciprofloxacin and none involving

nitrofurantoin have been published, suggesting that such associations may be underrecognized and warrant further attention.

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