

Case report-baboon syndrome with paracetamol**Roopa B.^{1*}, Sangeeth Kumar K.², P. Mary Rohini¹, Prasanna V.¹**

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ABSTRACT

Adverse drug reaction (ADR) is defined as “any response to drug which is noxious or unintended and occurs at a dose normally used in man for prophylaxis, diagnosis or treatment of diseases or for modification of physiological function”. Among the ADRs reported, cutaneous drug reactions are most common. Symmetrical drug-related intertriginous and flexural exanthema (SDRIFE), also known as baboon syndrome (BS), is included in the spectrum of systemically induced allergic contact dermatitis. Characteristics of SDRIFE include a sharply defined symmetric erythema in the gluteal area and in the flexural or intertriginous folds without any systemic symptoms or signs. We present a case of 30-year-old female with baboon syndrome after taking the combination of paracetamol and diclofenac. Awareness of SDRIFE (BS) as an unusual drug reaction is especially important since the connection between skin eruption and drug exposure may easily be overlooked or misdiagnosed.

Keywords: Aminopenicillins, Baboon syndrome, Paracetamol, Systemic contact dermatitis, SDRIFE

INTRODUCTION

Symmetrical drug-related intertriginous and flexural exanthema (SDRIFE), also known as baboon syndrome, lies within the spectrum of systemically induced allergic contact dermatitis. The condition-baboon syndrome (BS) was described as a mild, generalized cutaneous erythema appearing in intertriginous regions, buttocks and upper inner thighs resembling the red rump of baboons following oral exposure to either contact allergens like nickel, mercury, and to certain drugs.¹ They usually involve type IV allergic reactions which occur two to three days after initial exposure to the drug/allergen, in sensitized patients while it occurs after nine to ten days or sometimes up to two weeks after initial exposure in a non-sensitized

patients.² Although different drug eruptions mimic a variety of skin diseases, they rarely be similar to intertrigo and confined to specific, localized, well-demarcated areas, such as intertriginous regions and SDRIFE (baboon syndrome) can be easily diagnosed.

In recent decades, hundreds of drugs have been reported as being causative agents of this disease. Amoxicillin, ceftriaxone, penicillin, and erythromycin are the most common drugs, other drugs like antihypertensives, radiocontrast media also cause BS.³⁻⁵ Paracetamol belongs to non-steroidal anti-inflammatory drugs. Usually it is well tolerated. Paracetamol is a readily available over the counter (OTC) antipyretic. Despite its widespread use, adverse reactions are unusual at therapeutic dose involving

gastrointestinal, cardiovascular and respiratory systems. Its cutaneous adverse effects include rash and other allergic reactions, sometimes may lead to more serious reactions accompanied by drug fever and mucosal lesions or may vary from transient pruritis, maculopapular rash to Stevens-Johnson syndrome and even fatal toxic epidermal necrolysis.^{6,7}

Other serious acute adverse effect due to overdosage of paracetamol, is fatal hepatic necrosis.⁶ However, very few cases of SDRIFE were reported with paracetamol and none with other NSAIDs. Here we describe a case of 30-year-old female who developed Baboon syndrome following the use of combination of Paracetamol and Diclofenac tablet.

CASE REPORT

A 30-year-old female presented to dermatology OP of RVM institute of medical sciences and research centre with a history of fever and having taken self-medication of combination of paracetamol and diclofenac tablet from local pharmacy.

After taking the first dose, an erythematous rash originating all over the flexural areas including buttocks and inguinal area which rapidly progressed to the popliteal area, legs, neck and inframammary area. Associated erosions over the tongue were present. The rash had developed one day after first administration of paracetamol and diclofenac combination. There were no other systemic symptoms. Physical examination revealed a symmetrical, erythematous macular rash on the neck,

inframammary area, upper, lower extremities and more on the groins and buttocks. On examination of oral cavity multiple erosions over the tongue were seen. Systemic examination was normal. The patient was asked to stop the drug (paracetamol and diclofenac) and prescribed systemic steroids to provide symptomatic relief and hasten the recovery.

Oral corticosteroid (prednisone) was administered with gradual dose tapering, initially at a dose of 20mg daily (for 1 week), followed by 10mg daily (for one week) and finally 5mg daily (for one week). The lesions started resolving once the treatment was initiated and completely resolved within 10days.

There was no previous history of occurrence of similar rash when diclofenac was taken alone. There was no history of any other drugs used along with combination of paracetamol and diclofenac. The patient was thus diagnosed with symmetrical drug-related intertriginous and flexural exanthema due to paracetamol, based on the clinical features and previous drug history.

DISCUSSION

SDRIFE is an uncommon type of drug eruption. This condition is characterized by five clinical criteria: occurrence after exposure to systemic drugs, sharply demarcated erythema of the buttocks and/or V-shaped erythema of the thighs, involvement of at least one other flexural fold, symmetry, and the absence of systemic symptoms.¹

Table 1: Case reports of Symmetrical drug-related intertriginous and flexural exanthema (SDRIFE).

Author	Drug	Case reports
Cuneyt et al, ¹²	Ampicillin-sulbactam	14-year-old male patient, on the second day of the treatment developed well-contoured, bright red colored erythematous eruptions that faded with pressure were recognized in the anogenital region, groins, inner surfaces of the thighs and inner surfaces of the hands and fingers.
Erfan et al, ¹³	Codeine	A 60-year-old woman presented with a 4-day history of a pruritic, partly confluent, macular rash originating in the gluteal and inguinal area which rapidly progressed to the popliteal area, legs, neck and inframammary area.
Lugović-Mihić et al, ¹⁴	Paracetamol	A 33-year-old male patient had presented with reddish papules in the left axilla, spreading and becoming a maculopapular, symmetrically distributed rash involving axillary regions, sides of the trunk, inguinal regions, as well as cubital and popliteal fossae.
Satoh et al, ¹⁵	Valacyclovir	A 79-year-old male was diagnosed with herpes simplex of the lip, developed freshly erythematous, purpuric rash appeared symmetrically on the neck, as well as in axillary, inguinal, intergluteal areas with mild dysphoria 3hours after the valacyclovir administration. There were no mucous membrane lesions.
Present case	Paracetamol	A 30-year-old female developed erythematous rash originating all over the flexural areas including buttocks and inguinal area which rapidly progressed to the popliteal area, legs, neck and inframammary area. Associated erosions over the tongue were present. The rash had developed one day after administration of drug

The precise pathogenesis of SDRIFE is still unknown. It occurs after the systemic administration of drug-related allergens, regardless of known prior sensitization. The most common cause are aminopenicillins (amoxicillin), cephalosporins, exposure to nickel and mercury, drugs like omeprazole, clozapine and to biological and chemotherapeutic agents.⁸⁻¹¹

After a search of current literature, we could able to find a few cases reports described in Table 1.

Baboon syndrome is rarely observed in children but has been reported in an 18-month-old patient as a side effect of erythromycin for sore throat, and in a 5-year-old patient treated with co-amoxiclav for acute otitis media.^{16,17} BS eruptions may be misdiagnosed in children because they resemble childhood viral and bacterial infections and dermatoses. Why the rash particularly affects the flexural surfaces is unknown. Theories include that it is a form of recall phenomenon from a previous unrelated dermatitis or that metabolites of the causative agent are excreted preferentially from eccrine glands found in flexures.⁴

The diagnosis of SDRIFE is mostly based on the recognition of a clinical picture and history regarding taking drugs.⁵ It has no significant benefit in allergy testing as outcomes of allergy tests are variable with positive delayed intradermal tests (reported for penicillin V, allopurinol), positive patch tests (for erythromycin, mitomycin, nystatin, pseudoephedrine), positive lymphocyte transformation tests (for erythromycin) and positive drug provocation tests (for clindamycin, cimetidine, corticosteroids, terbinafine, and valacyclovir). Unfortunately, the outcomes of in vivo and in vitro tests have been inconsistent and thus may not be useful in the identification of the putative drug.⁵ In this case diagnosis is made clinically and having excluded other causes of such rash. Based on clinical and previous drug history of patient, we can conclude that SDRIFE is due to paracetamol. The combination of paracetamol and diclofenac is irrational, as there is no added advantage of combining them over their individual drugs instead it increases the risk of nephrotoxicity and other ADRs.^{18,19} Therefore, it is better to avoid prescribing the irrational combinations of NSAIDs and also it should not be easily available as over the counter drugs.

CONCLUSION

Self-medication with paracetamol is common as it is easily available as over the counter drug. Over the counter drugs may produce serious or nonserious reactions. Awareness of SDRIFE (BS) as an unusual drug reaction is important because the connection between skin eruption and drug exposure may easily be overlooked or misdiagnosed. It may also become very difficult to identify the exact etiological agent when such a reaction occurs as administration of same drug previously might not resulted in any adverse event. Sometimes, the possible reactions may be not only due to the drug, it may be due to the drug

additives also. Various problems in diagnosis and confirmation should also be addressed in detail.

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