



Fixed Drug Eruption Induced By Paracetamol: Uncommon Reaction To A Common Drug

¹Dr. Payal Dashrath Nikose*, ²Dr. Abhishek Jain, ³Dr. Prabha Khaire (More),
⁴Dr. Shilpa Pawar, ⁵Dr. Jalaja Bhandhekar
MD Pediatrics , ^{1,5}Resident Doctor, ²Assistant Professor, ^{3,4}Professor And Head,
Department Of Pediatrics Government Medical College And Hospital , Aurangabad

***Corresponding Author:
Dr. Payal Dashrath Nikose**

MD Pediatrics , Resident Doctor, Department Of Pediatrics ,
Government Medical College And Hospital , Aurangabad

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Abstract

Background- Fixed drug eruption (FDE) is a distinctive type of cutaneous drug reaction that characteristically recurs in the same locations upon re exposure to the offending drug. Its incidence varies from 2.5% to a high of 22% of all patients with cutaneous adverse drug reactions^[1] including data from the Indian population.

Clinical Description – Toxic eruptions induced by paracetamol are rare and usually of the fixed pigmenting type^[5] The reactions can present as maculopapular rash, cellulites like reaction, bullous reaction, or pigmenting type^[6,5,7,8] The pigmenting FDE, usually manifests as round or oval, sharply demarcated erythematous or oedematous plaques located on the lip, hip, sacrum, leg, hand, face, oral mucosa, and genitalia^[9]

Management- Avoidance of drug and use of alternative antipyretic to relieve fever.

Conclusion –Withdrawal of drug is needed and re exposure to paracetamol should be avoided in FDE case.

Keywords: fixed drug eruption, violaceous pruritic patch, paracetamol.

Introduction

Fixed drug eruption (FDE) is a distinctive type of cutaneous drug reaction that characteristically recurs in the same locations upon re exposure to the offending drug. Its incidence varies from 2.5% to a high of 22% of all patients with cutaneous adverse drug reactions^[1] including data from the Indian population. Paracetamol is one of the common drugs prescribed as analgesic–antipyretic agent in all age group of patients. FDE is a well-reported, but uncommon side-effect of paracetamol, usually the classic, pigmenting type most commonly found in children and adolescents.

Case Presentation:

A 9 years old female child brought with complaints of fever for 4 days and pruritic patch over back, face and buttocks since 2 days. The day before patch was visible, she was given paracetamol as antipyretic in

weight appropriate dosage. Within 3 hour of ingestion of the drugs, she developed itching over back and buttocks. A day later she developed bullae over these sites. She had no other drug intake in the last 3 months. Her past history revealed a similar episode 10 months back, which developed a day after taking paracetamol over the same sites and symptoms relieved after withdrawal of drug. There was no history of similar drug reaction with ingestion of other drugs.^[10]

Clinical Examination:

Patient was afebrile and vitally stable. Patient was having erythematous violaceous patch over buttocks and back. Clinical pictures are given in *figure 1*. She also had bullous lesion over upper extremities. There was no joint pain or swelling. There was no history of burning micturition and ear ache. Patient had taken

paracetamol 4 days back for fever. Patient for evaluated for same for rash. rash faded over 7-10 days after stoppage of drug intake. Blood investigations were normal as given in *table 1*. A diagnosis of FDE to paracetamol was made clinically. Although histologically these lesions show foci of basal cell vacuolation, lymphocytic exocytosis, and many necrotic keratinocytes at and

above the basal layer. However, we couldn't do skin punch biopsy due to poor resources and diagnosis was made clinically. The patient was treated with topical steroid-antibacterial preparation for 1 week and patient was advised not to take paracetamol in future. Other antipyretics were advised to relieve fever. On follow-up, resolution of the lesions with surrounding hyperpigmentation was seen.

Table 1: Investigations

Lab parameters	On admission	Day 4	On discharge
HB (gm/dl)	12.2	12	12.4
TLC(/mm3)	6800	7400	6200
PLATELETS	2.45 LAC	2.5 LAC	2.67 LAC
CRP	NEGATIVE	NEGATIVE	NEGATIVE
BLOOD C/S	SENT	STERILE	STERILE
NA/K	144/3.8	142/3.6	142/3.9
PT/INR	12/0.9	12/0.78	12/0.8
Absolute eosinophilic count	350	--	--

FIGURE 1

Bullae over shoulder



Solitary, violaceous macule over buttock



Violaceous macule



Discussion:

FDE to paracetamol is rare in children. The initial eruption of an FDE appears 1 week post drug exposure, whereas subsequent exposures to the same drug leads to the development of lesions within 30 min to 24 hour. These patches and plaques resolve within 2–3 weeks of discontinuing the offending agent, often leaving hyperpigmentation.^[2] Apart from the classical FDE, generalized, bullous, extensive bilateral symmetrical, pulsating, wandering, and non-pigmenting types have been reported. The most common drug known to cause FDE in children is combination drug trimethoprim-sulfamethoxazole.^{[3],[4]} Other drugs known are antibiotics such as tetracycline, amoxicillin, ampicillin, and erythromycin, NSAIDs such as ibuprofen, paracetamol, diclofenac, and ketorolac, phenobarbital, hydroxyzine, phenolphthalein, and temazepam.

Limitation:

Patch test and punch biopsy could not be done due to poor resources.

Conclusion:

Fixed drug eruption is uncommon after paracetamol ingestion. Withdrawal of drug is needed and re exposure to paracetamol should be avoided in these cases.

Lessons Learnt –

1. As a clinician, we should keep in mind that such a common antipyretic can also cause fixed drug eruption. Key is to diagnose it as early as possible and counsel parents about same.
2. Identification of the offending drug becomes even more challenging in scenarios when the patient is on multiple drug therapy. So past history should be carefully elicited to check other drug reactions
3. One must issue Drug alert cards which could play an important role in preventing recurrences. We report this case to draw attention to a rare side effect of paracetamol, one of the most common over the counter drug.

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