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Case Report

Fixed drug eruption due to paracetamol

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ABSTRACT

Fixed drug eruption is a common type of drug eruption seen in dermatology OPD's. Usually it is seen with sulphonamides, salicylates, tetracyclines, oxyphenbutazones, dapsone, barbiturates, phenolphthalein, morphine, codeine, quinine, phenacetin, erythromycin, griseofulvin, mebendazole etc. We hereby report a case of fixed drug eruption due to single dose of oral paracetamol in an otherwise healthy male after one hour of consuming it. A provisional diagnosis of Paracetamol induced fixed drug eruption was made. Paracetamol was stopped and patient advised never to take Paracetamol in future. Patient was managed with prednisolone 10mg /day, cetirizine 10 mg/day, and amoxicillin 500 mg twice a day and mometasone + fusidic acid cream to be applied over the lesions.

Keywords: Adverse drug reaction, Fixed drug eruption, Paracetamol

INTRODUCTION

Paracetamol is a widely used analgesic-antipyretic with consistent safety profile and very lesser adverse effects.[1] Cutaneous drug reactions (CDRs) are most frequent adverse events in patients receiving drug therapy. Various forms of cutaneous adverse reactions are morbilliform rashes, urticaria, fixed drug eruption (FDE), erythema multiforme, Stevens - Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN). FDE normally presents as single or multiple sharply demarcated erythematous lesions that commonly involves face, trunk, genitalia, lips, hands and legs with or without residual hyper pigmentation, when acute inflammation subsides. The lesion commonly recurs at the same location upon re exposure to the same agent. They are often asymptomatic without systemic symptoms but a local burning sensation may occur.

FDEs are commonly reported with sulfonamides, barbiturates, tetracyclines, phenenolpthalin, salicylates, morphine, codeine, erythromycin, mebendazole, phenylbutazone, dapsone, chlordiazepoxide , indomethacin and quinine.[2] Paracetamol accounts for only < 1.5 % of all FDEs.[3] Here we report a patient who developed FDE after single dose of oral paracetamol tablet.

CASE REPORT

A 21 year old male presented to the Skin and Venerology Department of GR Medical College and JA Group of Hospitals, Gwalior with a history of rash with associated burning and itching after ingestion of paracetamol 500 mg for fever 4 days back. He purchased this tablet on advice of a local chemist. He developed rash after 1 hr of intake of the drug and has not taken this or any other drug thereafter. Patient did not recall the past history of paracetamol ingestion. There was no history of any topical drug application. On cutaneous examination, well defined erythematous, violaceous patches of varied sizes were present over arm, back and neck of sizes 5.6 x 4.8 cm, 6.2 x 4.6 cm, and 4.7 x 3.8 cm respectively. Rashes were increasing in size with associated burning and itching so he visited to the skin OPD on 4th day. These patches were not present before paracetamol ingestion. His general and systemic examinations were unremarkable. Baseline investigations showed hemoglobin 12.8 g/dl, WBC 10600/mm^3, platelets 1.5 lakhs/mm^3. Examination of urine routine revealed no albumin, sugar, RBCs, pus cells, cast, epithelial cells, crystals or bacteria. Liver function tests were within normal limits. Ultrasound abdomen also showed no pathology.

The causality assessment was carried out by using Naranjo's ADR probability scale. In our case score was 5 showing probable association. A provisional diagnosis of FDE by Paracetamol was made. Patient was told not to take the offending drug again and was prescribed prednisolone 10mg /day, cetirizine 10 mg/day, amoxicillin 500 mg twice a day and mometasone + fusidic acid cream to be applied over the lesions for 7 days. Patient was followed thereafter. He recovered completely in 10 days with residual hyper pigmentation over the sites.

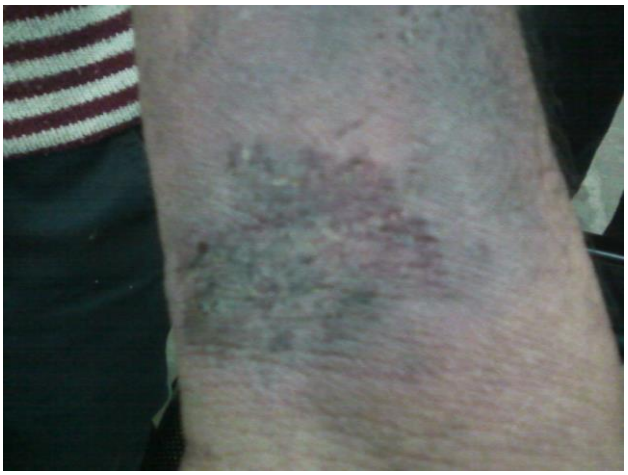

Figure 1: Ventral surface of forearm showing maculopapular rash.

DISCUSSION

Fixed drug eruptions are the third most common cutaneous reactions (CDRs) after morbilliform rashes and urticaria in patients receiving drug therapy. FDE is considered to be an allergic reaction, although exact mechanism is unknown. The offending drug is thought to function as a hapten that preferentially binds to basal keratinocytes, thereby releasing lymphocytes and antibodies thus damaging the basal cell layer.[4] It is believed to be a lymphocyte CD8-mediated reaction, where local reaction of memory T lymphocytes localized in epidermal and dermal tissues are targeted by an early viral infection. It is also reported that viral infections increase the predisposition to the development of CDRs. It is well known that immune responses in the skin are highly regulated by cytokines and other inflammatory mediators. Viral infections can also result in the release of a variety of cytokines that may up-regulate the expression of key immune-mediating molecules in keratinocytes and Langerhans' cells. Our patient had fever which may be viral as it subsided of its own after 3 days and might have predisposed to the development of FDE.

Among the few earlier reported cutaneous adverse drug reactions due to paracetamol in literature include cellulitis type FDE in 45 years Nepalese woman, vasculitis type FDE, acute generalized exanthematous pustulosis in a pregnant woman localized in the neck region, urticaria, fixed dermatitis, wandering fixed eruptions and toxic epidermal necrolysis associated with acetaminophen ingestion.[5-11] Other case reports published are FDE itself due to paracetamol.[12-13] Manivannan et al also reported 74.36% FDE cases due to NSAIDS in a recent study.[14] Our patient showed different presentation in the form of erythematous patches with associated burning and itching after 1 hr of ingestion of single dose of paracetamol. History of offending drug intake and assessment by using Naranjo's causality scale (score 5/13) shows a probable diagnosis of FDE due to Paracetamol. On stopping the further use of the offending drug the lesions subsided completely. Definite causal relationship is difficult to establish as rechallenge with the suspected drug was not done due to ethical consideration.

CONCLUSION

Paracetamol is a widely used analgesic-antipyretic drug with consistent safety profile. However, physicians should be aware of this type of uncommon cutaneous drug reactions so that they may tell the patients to stop the culprit drug and to report immediately and in future, proper drugs may be substituted for the offending drug so that patient may not have cosmetic problems by the residual hyper pigmentation.

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