Recurrent Solitary Skin Lesion on the Same Site

Al Mutasim Hamood Hammad Al Qassabi[1]*, Hajer Al Amri[2] and Reham Al Hinai[3]

[1]Bahla Hospital, Ministry of Health

[2]Diwan Polyclinic, Muscat, Oman

[3]Oman Medical Specialty Board, Muscat, Oman

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***Corresponding author:** *mhhh14@hotmail.com*

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Case

A Healthy 35 years old male presented to the dermatology clinic at Bahla Polyclinic with a skin lesion over the chest for 2 days duration. He reported an associated history of itching and mild pain. There was no history of fever or other constitutional symptoms. One day before presentation, he took Panadol Cold-Flu (each tablet contains paracetamol 500 mg, Chlorpheniramine 2 mg, and Pseudoephedrine Hydrochloride 30 mg) for flu symptoms. No other medication was taken. There was no travel history. He denied history of mosquito or insect bites. A thorough history revealed similar episode on the same site two years back preceded by flu symptoms for which he took the same medication.

Local skin examination showed a solitary, edematous, oval erythematous plaque over the left posterior chest with a central dusky color (Figure 1). There were no other skin lesions and rest of the physical examination was unremarkable. Mucous membranes were not affected.

Figure 1: Skin showing solitary, edematous, oval erythematous plaque over the left posterior chest with a central dusky color.

Question

What is the most likely diagnosis?

1. Insect Bite Reaction
2. Erythema Multifome
3. Erythema Migrans
4. Fixed Drug Eruption

Answer

Diagnosis is Fixed Drug Eruption based on history and typical skin lesion. Pseudoephedrine was suspected to be the culprit drug as the patient was taking paracetamol alone before with no such skin lesions, a re-challenge with pseudoephedrine hydrochloride alone resulted in a similar lesion on the same site. Naranjo ADR Probability Scale was >9 therefore histopathology examination was not done. The patient was treated with topical steroids, which resulted in clearance of the lesion leaving a post-inflammatory pigmentation as shown in (Figure 2).

Discussion

Fixed drug eruption (FDE) is an immunological cutaneous adverse drug reaction (CADR) characterized by skin lesions that occur at the same location every time there is exposure to the causative substance (1). Many clinical variants have been described including pigmented, non-pigmented, generalized, linear, generalized bullous, urticarial and oral.

FDE classically presents as one or a few, oval, sharply demarcated erythematous and edematous plaques with a dusky violaceous hue (2). There may be a central blister and associated pruritus or burning sensation. The most commonly affected sites are trunk, limbs, lips, palms, soles, penis, and groin. The eruption appears 1 to 2 weeks after first exposure and within 24 hours with subsequent exposures (2).

Many drugs can induce FDE. The most common drugs are paracetamol, tetracyclines, NSAIDs, dapsone, quinine, aspirin, sulfonamaides and phenolphthalein (1-3). The Ingestion of the causative agent may occur via any route, including oral, rectal, or intravenous. Pseudoephedrine Hydrochloride is known to cause non-pigmenting variant of FDE, however pigmenting variant caused by it have been reported as in our case (3)

The diagnosis is based on its typical presentation and lesion morphology. Skin Biopsy is usually not necessary unless the diagnosis is not clear. Systemic (oral) or topical (patch) provocation tests can be performed to identify the drug when the history is not clear or multiple drugs are suspected (4). Differential diagnosis include insect bite reaction, erythema multiforme (EM) and erythema migrans. All these diagnoses has no relation to drugs and doesn't recur on the same site. The number of lesions, distribution and morphology with target lesions help further differentiate EM from FDE. Insect bite reaction is differentiated by history of insect bite and clinical appearance of a central punctum. Erythema migrans has typical presentation of a bull's eye like lesion with slow expansion and associated history of a tick bite.

Avoidance of the offending drug is the most important step in the management of FDE. Topical steroids with or without oral antihistamines may be used to alleviate associated pruritus and erythema. Patients with generalized FDE can be treated with a short course of oral prednisolone 0.5-1 mg/kg per day for 3-5 days) (5).

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