Case Report

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Fixed Drug Eruptions- A Case Report.

Abstract:

Fixed drug eruption (FDE) is typically establishes as round or oval, sharply delineated erythematous or edematous plaques. Essentially it is a drug-induced cutaneous reaction that happens at the similar site with each exposure to a specific medication. Aextensive spectrum of drugs canoccasionally give rise to numerous contraryorofacial manifestations, predominantly dry mouth, taste disturbances, oral mucosal ulceration, and/or gingival swelling. However, the etiology of the FDE is still unknown, it is a delayed type of hypersensitivity reaction that occurs as lesions. By limiting the use of the term allergic to those reactions that are immunologically arbitrated or can reasonably be reputed to be, approximations are that drug allergy may account for 6–10% of these adverse reactions.

Key-words: Fixed Drug Eruption, Paracetamol, Oral cavity.

Introduction:

The fixed drug eruption/adverse drug reaction (ADR) according to the World Health Organization, may be defined as "A response to a drug which is noxious and unintended, and which occurs at doses normally used or tested in man for the prophylaxis, or therapy of disease, or for the modification of physiological function.[1]

Intraoral fixed drug eruption may occur in patients who are administered on repeated occasions, a drug to which they are sensitive. The oral lesions appears as localized area of erythema and edema commonly seen on labial mucosa and other intra oral sites and in severe stage it may develop into vesico-ulcerative lesions.[2]

Fixed drug eruption (FDE) is a rare adverse drug effect. The term FDE was first introduced by Brocq in 1894. The common FDE causative agents are usually intermittently used medications. The most common categories of the causative agents are antibiotics, antiepileptics, hypnotics, and analgesics. Nonsteroidal anti-inflammatory drugs (NSAIDs), including phenylbutazone, ibuprofen, naproxen, piroxicam, and celecoxib, may cause FDE as well.[3]

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Case Presentation:

A 42 year old female patient reported to the Department of Periodontology and oral Implantology, Hazaribag college of Dental Sciences & Hospital, Hazaribag with the chief complain of pain in upper front region of jaw since 1 week. History of fever reported 10 days back due to which she had

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taken medication (Paracetamol 650mg), after taking medication, she noticed pain along with ulceration in 11,12,21 and 22 teeth region at palatal region that subsided once the medication was discontinued. History of recurrent episode of ulceration in the same region noted while taking Paracetamol since 1 year. No relevant past dental and medical history given.

Intraoral examination revealed a well-defined erythematous lesion at anterior aspect of palatal region between 11 and 21 tooth number extending distally towards 21 with irregular margins as shown in fig.1, on probing deep pocket was present in respect to 11.

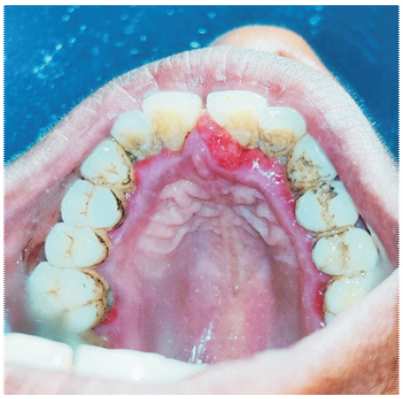

Fig 1 Pre Treatment photograph

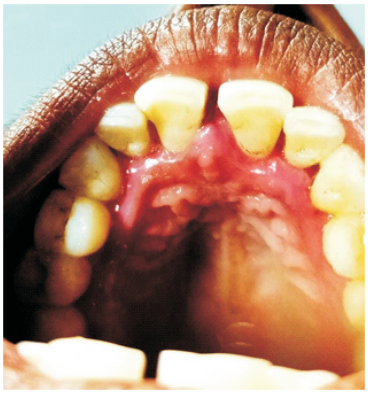

Fig 2 Post treatment photograph

Laboratory finding showed random blood sugar level 108mg\dl (normal level: 70-140mg\dl), ESR 50mm\1 hr. (normal level : 0-15 mm\1hr.) , bleeding time 02:15 min(normal level : BT 2-4 min) and clotting time 04:25 min (CT 4-8 min).

Scaling and curettage was done at the site and Lycopene tablet were prescribed and for topical application kenacort 0.1% oral paste was given.

Patient was recalled after 15 days.On intra oral examination lesion was completely healed with no tenderness/ redness at the site as shown in fig. No.2.

Discussion:

Drug allergy is one type of unpredictable ADR that surrounds a spectrum of immunologically mediated hypersensitivity reactions. It accounts for approximately 5–10% of all ADRs. Fixed drug eruption (FDE) is one of the rare adverse drug effect. FDE is characterized by onset of oval, erythematous well-defined macules on the skin and/or mucosa associated with pain, itching and sometimes burning sensation. The exact mechanism causing FDE is unknown, although studies strongly suggest involvement of the immune system. The oral cavity may be the target organ for a number of diverse abnormalities that develop from the side-effects of medications.

There are different classifications of ADRs. The most commonly used classification, proposed by Rawlins and Thompson, differentiates these reactions into two major subtypes:

Type A reactions that are due to a pharmacological propriety of the causative drug and are thus predictable

Type B reactions that occur only in predisposed individuals and are thus hard to predict.

Gell and Coombs classified immune-mediated allergic reactions to drugs, which describes the predominant immune mechanisms involved in these reactions. This classification system includes:

Type I -Immediate-type reactions mediated by immunoglobulin E (IgE) antibodies.

Type II -Cytotoxic reactions mediated by immunoglobulin G (IgG) or immunoglobulin M (IgM) antibodies.

Type III - Immune-complex reactions Type IV -Delayed-type hypersensitivity reactions mediated by cellular immune mechanisms, such as the recruitment and activation of T cells.[1]

Systemic medications can cause allergic reactions in the mouth as a fixed drug eruption called stomatitis medicamentosa. Fixed drug eruptions are localized hypersensitivity reactions that recur in the same site each time

the causative drug is ingested and often heal with residual hyperpigmentation. Oral lesions can also be erosive and ulcerated. They may occur on the gingiva and palate, although the buccal mucosa, lips, and tongue are more frequently involved.[4]

The finding of the causative agents for FDE is challenging when one receives more than one medication. The rechallenge test seems to be the most reliable method to identify the causative agents even though it is not always accurate and probably risky. The results of the skin patch tests on the healthy side or on the lesion side can vary. It was shown that the skin patch test on the affected side was positive in up to 43% of the patients. Negative test results may be due to testing time, testing in an uninvolved area, or low concentration of drugs used in patch test. Also the patient might not have been sensitive to the original medication but rather to its metabolites. In this present case, the most suspicious agent was paracetamol.[3]

Isolated mucosal FDE without additional skin involvement is a rare finding. The diagnosis of FDE with isolated oral mucosal involvement is always a challenge to the physician. A solitary bullous/ erosive lesion should be distinguished from major aphthous ulcer, primary or secondary syphilitic lesions (eg, chancre, mucous plaque) or irritant lesions such as thermal burns. On the other hand, it might be difficult to differentiate multiple erosive FDE from pemphigus vulgaris or bullous drug eruptions such as erythema multiform [EM] major or Stevens-Johnson syndrome.[5]

It is important to differentiate dysmenorrhea-related monthly attacks of oral mucosal FDE due to NSAIDs in female patients from menstruation-triggered attacks of herpes simplex infection.[5]

Systemic provocation is the 'gold standard' for identifying the causative drug in FDE. It is a safe and still the most trustworthy method for the diagnosis of FDE with a high sensitivity and specificity. However, it may lead to generalized bullous lesions in some cases.In general, antibiotics, analgesics, antiphlogistics and hypnotics are the most frequent culprit drugs, although the offending drugs differ from country to country. Therefore the suspected drug should be administered in graded doses starting with a subtherapeutic dose (eg, one-eighth of a single dose) until the full therapeutic dose is achieved. This would elicit a positive reaction at the lowest possible dose.[6,7,8]

The most common presentation of FDE is pigmented patches on the tongue has been reported.[9]

In this present case, based on the patients history of repeated exposure to Paracetamol and occurrence of the lesion was the positive factor in deciding the diagnosis. Though punch biopsy can also be performed for the definitive diagnosis. When the patient approached us she was taking Paractamol, when she discontinued the drug lesion disappeared, again it appeared at the same site when she started taking the medicine.

There are numerous case reports of FDE caused due to NSAID, mainly pirazolones, oxicams or aspirin, but FDE due to paracetamolis rare.[10]

Conclusion:

A wide spectrum of drugs can give rise to so many adverseorofacial manifestations. Since most drug reactions occur within one to two weeks following initiation of therapy, reactions are noticed after two weeks which are less likely to be due to medication use, because most of the time reactions are dependent on dosage or cumulative toxicity. The most common reactions are gingival swelling accompanied with ulceration, dry mouth, alteration in taste etc. Druginduced oral mucosal ulceration is mostly seen in cancer patients undergoing chemotherapy. Although allergic reactions to NSAIDs account for only a small proportion of reported ADRs. Therefore, awareness among dental and medical practitioners about FDE can lead to proper diagnosis and treatment in order to prevent unnecessary morbidity and the potential risk of life threatening reactions from these drugs.

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