ALLERGIC & IMMUNOLOGIC DISEASES OF ORAL CAVITY

LEARNING OBJECTIVES

- At the end of the lecture student should describe
- Incidence,Prevalence,Clinical Features ,Oral manifestations,Diagnostic criteria,Treatment modalities & Complications of
- Angioedema
- Drug allergy

ANGIOEDEMA

- Angioedema is a diffuse edematous swelling of the soft tissues commonly involving the subcutaneous and submucosal connective tissues.
- It results in death occasionally when the gastrointestinal or respiratory tract is involved.


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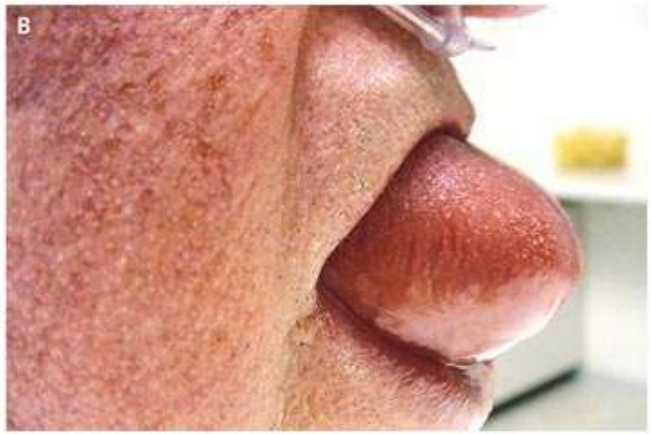
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PATHOGENESIS

- Alteration in vascular permeability.

- Considering the fact that many angioedema patients present with psychological problems, it has also been erroneously referred to as 'angioneurotic edema' in the past

CAUSES

- 1) Allergic angioedema (due to mast cell degranulation)
- 2) Associated with use of angiotensin-converting enzyme (ACE) inhibitors
- 3) Activation of complement pathway:
    a) hereditary form
    b) Acquired form
- 4) Due to presence of high levels of antigen-antibody complexes

CLINICAL FEATURES

- Soft, nontender, diffuse edematous swelling of relatively rapid onset
- Solitary or multiple, most commonly involving the face around the lips, chin, eyes, lips, tongue, pharynx, and larynx

- Hands, arms, legs, genitals, and buttocks are involved.
- Measure upto several centimeters in diameter.
- The eyes may be swollen shut and the lips extremely puffy..

- The symptoms appear rapidly, sometimes being present when the patient awakens in the morning.
- A feeling of tenseness or an itching or prickly sensation sometimes precedes the urticarial swelling.

- The skin may be of normal color or slightly pink. Perioral and periorbital edema are characteristic of allergic edema
- Intraoral edema is typical of allergic edema and edema related to ACE inhibitors.

- The enlargement usually resolves within 24-72 hours, although some cases persist for several days.
- The disease affects both genders about equally, but is infrequent in children.

- The hereditary forms of angioedema may be more dangerous because of involvement of respiratory and gastrointestinal systems.
- Involvement of the upper airway can be life-threatening. Hoarseness of voice and difficulty in breathing are important signs.
- Gastrointestinal symptoms include continuous pain, vomiting, and rarely watery diarrhea.

TREATMENT & PROGNOSIS

- Removal of etiologic agents.
- Antihistaminics drugs
- If laryngeal involvement is present, intramuscular epinephrine should be administered.
- If epinephrine does not stop the attack, intravenous corticosteroids and antihistamines

DRUG ALLERGY

- Drug allergy includes a variety of sensitivity reactions following exposure to any one of a great many drugs and chemicals but is not related to any pharmacologic activity or toxicity of these materials.

- Practically every known drug has been recognized at one time or another as capable of producing an allergic reaction in a sensitive person.

PATHOGENESIS OF DRUG ALLERGY

- IgE mediated reactions may occur when the drug reacts with IgE antibody bound to mast cells, with subsequent release of chemical mediators.
- An antibody binds to the drug that is already attached to a cell surface. The pathologic changes that ensue depend on the target cell involved.

- The antigen circulates for extended periods, allowing sensitization of the patient's immune system and the production of a new antibody.

- In non-immunologic drug reactions, drugs directly affect the mast cells, causing release of chemical mediators.

CLINICAL FEATURES

- The various allergic reactions to systemic administration of a drug are seldom anaphylactic in suddenness of appearance.
- But instead occur several hours to several days or longer after the beginning of the drug administration.
- The allergic reaction of the skin is called dermatitis medicamentosa.

- Skin lesions, arthralgia, fever, lymphadenopathy, and rarely agranulocytosis

- The skin lesions may be of erythematous type, as in erythema multiforme, urticarial in nature, manifest as exfoliative dermatitis, or as fixed drug eruptions.

- Commonly drugs such as aspirin, barbiturates, chloramphenicol, tetracycline, penicillin, streptomycin, and sulfonamides, are implicated in allergic drug reactions.

ORAL MANIFESTATIONS

- An allergic reaction of the mucosa to the systemic administration of a drug is called stomatitis medicamentosa.

- The most common type of allergic reaction of oral mucosa is erythema multiforme ,characterized by multiple ulcerations of the tongue, palate, buccal mucosa,& gingiva, with associated pain& discomfort.

- The other common patterns of oral mucosal disease are anaphylactic stomatitis, intraoral fixed drug eruptions, lichenoid drug reactions, lupus erythematosus-like eruptions, pemphigus-like eruptions, and nonspecific vesiculoulcerative lesions.

- Anaphylactic stomatitis arises after the drug enters the circulatory system and binds to IgE-mast cell complexes.
- Most commonly, penicillin and sulfa drugs produce anaphylactic stomatitis
- The oral lesions may occur alone or in association with urticarial skin lesions or other signs and symptoms of anaphylaxis (like hoarseness, respiratory distress, and vomiting).

- The affected mucosa exhibits diffuse distribution of lesions, varying in appearance from multiple areas of erythema to extensive areas of erosion or ulceration.
- This 'fixed' eruption consists in the appearance of a skin reaction at the same sites each time and is apparently due to local sensitization of the tissues. Nevertheless the skin 'patch' text is negative.

- Drugs commonly implicated in such allergic reactions include barbiturates, salicylates, phenazone derivatives, sulfonamides, and tetracycline.

- The oral lesions appear as localized areas of erythema and edema, commonly seen on the labial mucosa and can later develop into vesiculoulcerative lesions.

- Lichenoid drug reactions, lupus erythemato-suslike eruptions, and pemphiguslike eruptions resemble their namesakes clinically, histologically, and immunologically.

- Usually bilateral and symmetric oral lesions are seen in these drug reactions, commonly involving the posterior buccal mucosa and the lateral borders of the tongue, even though any mucosal surface may be involved.

ORAL LESIONS

- Oral lesions of the gingiva often resemble necrotizing gingivitis or Vincent's infection.
- Hairy tongue, black, brown, or yellow as a complication of antibiotic therapy(penicillin)
- Alteration of intestinal flora with disturbances in elaboration of vitamins or vitamin components
- The lingual papillae will sometimes be desquamated

HISTOPATHOLOGIC FEATURES

- Subacute mucositis with an admixture of lymphocytes, eosinophils, & neutrophils

- Vacuolar change of the basal layer,
- Individual necrotic epithelial cells

- *String of pearl's* has been noted along cell membrane of the basal layer cells in lichenoid reactions, by indirect immunofluorescence.

TREATMENT & PROGNOSIS

- The signs and symptoms regress with discontinuance of the causative agent.
- Antihistaminic drugs or cortisone.
- Adrenaline, corticosteroids, or antihistamines in case of anaphylactic stomatitis.
- Recurrence can be prevented only by complete abstinence from use of the particular drug involved

SUMMARY

- Introduction,Epidemiology,clinical Features ,Oral manifestations,Diagnostic criteria,Treatment modalities & Complications of
- Angioedema
- Drug allergy

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Thank You