

ALLERGIC & IMMUNOLOGIC DISEASES OF ORAL CAVITY-II

LEARNING OBJECTIVES

At the end of the lecture student should describe -

- ◉ Clinical Features, Oral manifestations, Treatment modalities, histopathology of contact stomatitis & dermatitis & Perioral dermatitis

CONTACT STOMATITIS & DERMATITIS

- ◎ It is a type of reaction in which a lesion of the skin or mucous membrane occurs at a localized site after repeated contact with the causative agent.
- ◎ Causative agents are chemical in nature (haptens) and require conjugation with proteins to become effective.

- ⦿ Intraepithelial Langerhans cell where the hapten is converted into a competent antigen
- ⦿ Following antigenic rechallenge, local lymphocytes secrete chemical mediators of inflammation (lymphokines) that produce the clinical and histologic changes characteristic of this process

Group of materials which frequently cause the oral lesion or stomatitis venenata, These may be classified as follow:

- ◎ 1.Dental or cosmetic preparations
- ◎ Dentifrices
- ◎ Mouthwashes
- ◎ Denture powders
- ◎ Lipstick, candy, cough drops, chewing gum

◎ 2. Dental materials

- ◎ Rubber dam
- ◎ Vulcanite
- ◎ Acrylic
- ◎ Metal alloy base .

◎ 3. Dental therapeutic agents

- ◎ Alcohols
- ◎ Antibiotics
- ◎ Iodides
- ◎ Phenols
- ◎ Procaine
- ◎ Volatile oils

CLINICAL FEATURES

- ◉ Manifested by itching or burning sensation at the site of contact, followed shortly by the appearance of an erythema & then vesicle formation.
- ◉ Rupture of the vesicles- extensive erosion
- ◉ In chronic contact, the skin may become thickened and dry.

ORAL MANIFESTATION

- ◉ Oral cavity is less sensitive than the skin surface,
- ◉ Shorter period of contact in the oral cavity
- ◉ Saliva dilutes & removes many antigens,
- ◉ Rapid dispersal & absorption of antigens - facilitated by the anatomy of the oral mucosa
- ◉ lower density of Langerhans cells and T lymphocytes - Fewer chances for the antigen to be recognized considering the.

- ◉ The mucosa - Remarkably inflamed & edematous, imparting a smooth, shiny appearance
- ◉ Gingiva -uniform bright red
- ◉ Buccal mucosa -puffy & dark red
- ◉ Swollen & edematous features subject to erosion and ulceration are more common in the lips.
- ◉ Secondary infection
- ◉ Severe burning sensation, Itching, stinging, tingling & edema

- In chronic cases, the affected mucosa is typically in contact with the causative agent and may be erythematous or white and hyperkeratotic.
- Common patterns in chronic contact include.
 - erosions, widespread erythema

- ⦿ Acrylic -contact allergy when used either as a denture base or as a filling material.
- ⦿ The tissues - highly inflamed and are painful.
- ⦿ Oral candidal infection.
- ⦿ True acrylic sensitivity is extremely uncommon.
- ⦿ Allergy to metal base alloys is also rare.

- ⦿ Epoxy resins, several amine curing agents
- ⦿ common materials as antibiotics, alcohol, chloroform, phenol, or volatile oils.
- ⦿ Besides these common contactants, two compounds, cinnamon and amalgam

HISTOPATHOLOGIC FEATURES

- ◉ Intra- & inter-cellular edema of the epithelium along with vesicle formation within the epithelium or at the basement membrane
- ◉ Engorged & dilated blood vessels in the connective tissue against a background of edema & an infiltrate of lymphocytes & plasma cells.

- ◉ In some lesions, the allergen elicits a heavy plasma cell response as observed in plasma cell gingivitis.
- ◉ Increased number of eosinophils is a common finding in allergic reactions.

TREATMENT & PROGNOSIS

- ◎ The only treatment for contact dermatitis or stomatitis consists in discontinuing all contact with the offending material. When this is done, there is usually prompt remission of all lesions

CONTACT STOMATITIS FROM CINNAMON FLAVORING

- ◎ Cinnamon oil is used as flavoring agent in confectionery, ice cream, soft drinks, alcoholic beverages, processed meat, gum, candy, toothpastes, breath freshener, mouthwash, and even dental floss.
- ◎ Oral reactions with prolonged or frequent contact like candy, chewing gum, & toothpaste.

CLINICAL FEATURES

- ⦿ Characterized by plasma cell gingivitis like lesions of the gingiva, associated with enlargement, edema, and erythema.
- ⦿ Erythematous mucositis of buccal mucosa and tongue, exfoliative cheilitis, and circumoral dermatitis.

- ◉ Chewing gum and candy produce more localized lesions not involving the vermilion border of lip or circumoral skin.
- ◉ On Buccal mucosa -hyperkeratotic lesions with an erythematous base, seen aligned along the occlusal plane.
- ◉ Lingual keratosis may mimic oral hairy leukoplakia or carcinoma.

HISTOPATHOLOGIC FEATURES

- Acanthotic epithelium, with elongated rete ridges, thinned suprapapillary plates, hyperkeratosis, & neutrophil exocytosis
- The underlying connective tissue exhibits a diffuse chronic inflammatory infiltrate predominantly consisting of lymphocytes, with characteristic perivascular infiltration of lymphocytes

TREATMENT & PROGNOSIS

- ◎ The reactions from cinnamon flavoring disappear within a week of discontinuance of cinnamon products. However, the lesions reappear within 24 hours if the patient resumes intake of the product.

CONTACT STOMATITIS FROM CHRONIC ORAL MUCOSAL CONTACT WITH DENTAL AMALGAM

- ◉ Widespread use of dental amalgam - neurotoxicity, kidney dysfunction, reduced immunocompetence, alterations of oral and intestinal flora, birth defects, and adverse effects on general health.
- ◉ Frequency of one case per million.

CONTACT LICHENOID REACTIONS TO AMALGAM.

- ⦿ Among the patients previously diagnosed with lichenoid lesions, a subgroup exhibits lesions that do not migrate, usually involving only the mucosa directly in contact with the amalgam restoration, and resolving rapidly after removal of the dental amalgams. These lesions are termed as contact lichenoid reactions to amalgam.

CLINICAL & HISTOLOGIC FEATURES

- ⦿ Amalgam induced contact reactions are commonly observed in the posterior buccal mucosa, ventral border of the tongue, and gingival cuffs adjacent to subgingival amalgam restorations.
- ⦿ The lesions appear white or erythematous with or without striae.

- Histologically, features similar to lichen planus like hydropic degeneration of basal cell layer, hyperkeratotic or atrophic epithelium, and dense band-like chronic inflammatory infiltrate consisting predominantly of lymphocytes are observed occasionally with perivascular lymphoid aggregates.

TREATMENT & PROGNOSIS

- ◉ Management should be aimed at improving oral hygiene, smoothening, polishing, and recontouring of the restoration before adopting aggressive measures.
- ◉ If unsuccessful, the amalgam in question should be removed and replaced with a non-metallic restoration.

PERIORAL DERMATITIS

- A unique inflammatory skin disease of the circumoral area ,arise as an idiosyncratic response to the use of exogenous substances such as tartar-control toothpaste, bubblegum, moisturizers, night creams, and other cosmetic products.

CLINICAL FEATURES

- ◎ Papules or papulopustules, involving the skin surface surrounding the vermilion border of the lips, with a zone of spared skin immediately adjacent to the vermilion border.
- ◎ Pruritus may be present.

- ⦿ Women -use of cosmetic products.
- ⦿ Lesions associated with tartar-control toothpastes present as a zone of erythema, without the papules or pustules, immediately adjacent to the vermilion border without the classic sparing of this area- Circumoral dermatitis

HISTOPATHOLOGIC FEATURES

- ◉ Chronic lymphohistiocytic dermatitis or a rosacea-like pattern mimicking sarcoidosis has been commonly observed.

Treatment and Prognosis-

- ◉ Management consists of discontinuance of the topical corticosteroids and prescribing topical metronidazole, with or without topical tetracycline. Recurrences are uncommon.

SUMMARY

- ◎ Introduction ,Manifestations, Oral manifestations, Treatment modalities, histopathology of contact stomatitis & dermatitis & Perioral dermatitis

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Thank You