

Original Research

Autoimmune diseases and their oral manifestations

Tushar Maheshwari

2nd Year, B.D.S, Daswani dental college & research centre, Kota, Rajasthan, India

ABSTRACT:

Oral signs are frequently first manifestations of autoimmune disease therefore, dental surgeons play important role in detection of emerging pathologies. Autoimmune diseases are rare pathological states arising from an abnormal immune response to substances and tissues that are normally present in the body. These diseases are multifactorial, heterogeneous and variable conditions that may exist in several organs and cell types. The pathomechanisms of autoimmunity are multifactorial and mostly unknown. The stability and functionality of tissues is a complex and strictly regulated process where immune system plays a role. Pathogens can affect the regulation and autoimmunity reactions may follow. Infection can induce autoimmunity either via the innate or adaptive immune responses

Autoimmunity can be defined as the presence of immune response against self tissue Autoimmune connective diseases like systemic lupus erythematosus - SLE, systemic sclerosis - SS, rheumatoid arthritis - RA : have characteristics of oral findings, the identification of which allow early treatment. Autoimmune diseases have abnormality in structure of elements of connective tissue. Collagen develop from mesoderm which is scattered widely in whole of body

In oral cavity collagen is present in gingiva, periodontal ligaments, pulp, temporo-mandibular joint, cementum, basal bone. Any disease which affect collagen will eventually affect the oral tissues and its functions.

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Corresponding author: Tushar Maheshwari, 2nd Year, B.D.S, Daswani dental college & research centre, Kota, Rajasthan, India

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Oral tissue	Collagen type	Function
Alveolar bone	Type I	Resist mechanical shear from any direction
Periodontal ligament	Type I, III	Flexibility and strength to the tissue ^[3]
Cementum	Type I	Regulating periodontal tissues during development and regeneration ^[2]
Dentin	Type I	Accommodation of minerals in the holes and pores of fibrils
Pulp	Type I, III	Provide strength to connective tissue
Gingiva	Type I, IV	Provide strength to connective tissue ^[4]
TMJ	Type I, II and III	Structural component of intra-articular disc and provide reinforcement and mechanical stability under compression ^[5]

DISEASES

SYSTEMIC LUPUS ERYTHEMATOSUS

Its a chronic autoimmune disease Affect more women than men

Probability- 12-50 in 100,000 individuals Oral discoid lesions are prevalent signs

Malar rash (butterfly like) located on nose and cheeks

DIAGNOSIS

Include lichenoid reaction to dental fillings , verrucous carcinoma

TREATMENT

Corticosteroids high and medium potency used for topical therapies for cutaneous manifestations

DENTAL CONSIDERATIONS

Platelet count to be estimated before surgical procedure to evaluate severity of thrombocytopenia .Due to cardiac involvement in these patients precautions like antibiotic prophylaxis must be considered

SJOGRENS SYNDROME

- Autoimmune disease
- Affect salivary and lacrimal glands
- Causes
- Xerostomia
- Deficiency of tears
- Unknown etiopathology
- Later age disease

SIGNS

- Majorly related to oral cavity
- Develop tooth cavity
- Accumulation of plaque due to lack of saliva
- Opportunist infections like candidiasis

DIAGNOSIS

- Xerostomia present
- Biopsy of minor salivary gland
- Difficulty in speech and metallic sensations

TREATMENT

- Corticosteroids and immunosuppressants

BEHCETS DISEASE

- Unknown etiology.
- *Characterised by* : oral ulcers , eye inflammation
- Mucocutaneous lesions are very often first signs of presence of behcet syndrome
- Their recognition is key factor for early diagnosis. Lesions localised at lip , buccal mucosa, tongue , and soft palate

TREATMENT

- Use of local and systemic cortisones , Coupled with immunosuppressant drugs

MAIN OBJECTIVE

Is to treat in time the oral mucocutaneous lesions in order to hinder progression of disease

OTHER AUTOIMMUNE DISEASES

PEMPHIGUS AND PEMPHIGOID

MAIN FEATURES ARE

- Pemphigus rather rarely occurs in oral mucosa;
- Pemphigoid is somewhat more common in oral cavity , especially in when of middle aged

LOCATION

- Everywhere in the oral cavity, pemphigoid is particularly seen on palatal mucosa , usually in a symmetrical pattern

DIAGNOSIS

- The Nikolsky sign is rather typical of pemphigus

TREATMENT

Symptomatic; local use of corticosteroids can be considered

VASCULITIS

Oral insistent of granulomatous with polyangitis has been observed. However, most common characteristic oral lesion hyperplastic gingivitis presenting with a STRAWBERRY like appearance. Occasionally, oral lesions are observed before multi-organ involvement occurs.

TREATMENT

Local topics agents can be used for treatment of ulcers and immunosuppressives such as corticosteroid and azoprine are used for management of disease

ANKYLOSING SPONDYLITIS

TMJ may be involved with ossification of ligament , bony erosions , condylar flattening, destruction of disc, and reduced range of motions

NSAIDS- are recommended for treatment

OVERVIEW

Subject with a higher plaque index appeared to be more likely to develop autoimmune diseases. Most diseases of oral mucosa are either autoimmune in nature or are results of immunologically mediated events

Its important for us to know cause no other medical branch works in more close approximation with conscious patients than that compared to dental surgeons Especially the number of visits involved and conversations with patients are more marked in dentistry.

Detection and diagnosis at our level (dental surgeon) considering the first sign are oral manifestations improve the prognosis , and help in achieving major

milestone towards achieving better prognosis and reduced fatality. Mouth sores , bleeding (gums) disorders , a weekend immune system, or in rare cases oral cancers arise due to autoimmune disease. Delayed detection and diagnosis worsens the prognosis as well as high dose steroids used at latter age cause systemic side effects as altered b. p and sugar levels. Subjects with a higher plaque index appeared to be more likely to develop autoimmune diseases.

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