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DENTURE STOMATITIS: THE REVIEW

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ABSTRACT
When adjusting with the new denture, the patient possessed various complications in post insertion phase. One of the most common is Denture Stomatitis. Poor hygiene maintenance leads to growth of adverse microflora, which initiates various diseased conditions like denture sore mouth or Oral thrush which is also called as denture stomatitis. The severity of the disease varies in various patients. Sometimes it require the significant time in the healing. So it is important to understand the nature of Denture stomatitis. Present article is focusing on clinical features, classification, various causes and the treatment aspect including herbal extracts used for the Denture Stomatitis.

KEYWORDS: Candidiasis, Denture stomatitis, Herbal extracts, Nystatine, Sore spot.

INTRODUCTION

Success of in the treatment of the prosthetic patients requires not only mechanical skills and proficiency but also knowledge of the physiology of the involved anatomic structures and an understanding of the possible pathologic changes that may occur after the treatment. Denture sore mouth is one of the most common conditions associated with the Prosthesis.

Clinical features

In most patients there is a generalized redness of the tissues and metallic tastes in the mouth may be reported by the patient. Petechie may be present, and in rare instances vesicles occasionally may form. Sometimes even presence of the oral trush like lesions was also noticed. The most dramatic objective symptoms are usually seen under the maxillary denture, although the most severe subjective symptoms may be associated with the mandibular dentures. Also smokers have more chances to get involved as compare to the nonsmoker.[1]

Denture-related stomatitis is also termed denture sore mouth, denture stomatitis, chronic atrophic candidiasis, Candida-associated denture induced stomatitis, inflammatory papillary hyperplasia and denture-associated erythematous stomatitis.[2] Denture-induced stomatitis occurs more frequently with upper dentures. This may be because of the larger area of coverage and is held in place with more suction power. Normally a harmless oral microflora, Candida species are involved in this infection. Diabetics and anyone who takes steroids, either through inhalers or by mouth, may also have problems.[3] Sometime there may be extreme redness of the tissues with no discomfort reported by the patient. On the other hand, visible changes in the tissues may absent although the patient will report great pain and discomfort. Burning of the tongue may be symptom. The term “chronic denture stomatitis” also applies when the patient has new dentures that are clinically good or adequate but continues to have ulcer that develop long after a normal adjustment period.[4]

Etiological factors

The etiology of Denture stomatitis is multifactorial, with the faulty prosthesis considered the prime etiologic factor. An allergy in the form of contact mucositis can occur. This reaction may be related to the presence of resin monomers, hydroquinone peroxide, dimethyl-p - toluidine, or methacrylate in the denture. Contact sensitivities such as this one are more common with cold or auto cured resins than with heat-cured denture-base materials.[5] Poor-fitting dentures can increase mucosal trauma by increasing pressure on the mucosa and mechanical irritation may create a similar clinical appearance, but this is uncommon. An orthodontic appliance may uncommonly produce a similar result. However, mucosal trauma can increase the ability of C. albicans to invade the tissues.[2]

Other factors are poor denture hygiene, continual and night time wearing of removable dentures, accumulation of denture plaque, bacterial and yeast contamination of denture surface. All of these factors appear to increase the ability of Candida albicans to colonize both the denture and oral mucosal surfaces and cause stomatitis.[6]

Predisposing factors that cause denture stomatitis includes, Old age, Diabetes mellitus, Nutritional deficiency, Malignancy, Immune defects, Xerostomia, Sjogren's syndrome, irradiation, drug therapy, High carbohydrate diet, Use of broad spectrum antibiotics, Smoking tobacco.[7]

Classification

It can be classified into 3 types[8]

Type 1-localised simple infection with pinpoint hyperaemia and is usually trauma induced.

Type 2-erythematous type, but covers the entire or a part of the denture covering area.

Type 3-granular type, involving the central part of hard palate and alveolar ridge

Another classification of spectrum of Denture stomatitis include clinically distinct entity[4]

1. Chronic denture stomatitis
2. Inflammatory Denture Hyperplasia. (Epulis Fissuratum)
3. Inflammatory papillary hyperplasia
4. Trumatic Ulcer (sore spot)

Treatment

Treatment of Denture Stomatitis aims at removal of the etiological factor (Candida infection) and avoiding or treating the predisposing Factors. Hygiene is mandatory, with daily thorough brushing.

General measures include mechanical plaque control and appropriate denture-wearing habits; denture sanitization is an important element in the treatment of denture stomatitis.

For Denture Sanitization the dentures should be soaked overnight in an antiseptic solution such as chlorhexidine or dilute sodium hypochlorite. If the denture base contains metal, the patient should avoid using hypochlorite because it causes metal to tarnish. Another benefit of the regimen of overnight denture soaking is that the patients must remove their dentures for a prolonged period. Removal of the denture minimizes additional irritation and is a cornerstone of treatment.[9,10]

Topical antifungal therapy treatment of choice for localized candidiasis in healthy patients. It is available in a variety of forms such as suspensions, pastilles, tablets, lozenges, creams, powders, and gels. Nystatin is commonly used as topical antifungal preparation. Nystatin is a well-tolerated drug. It rarely produces side effects such as nausea, vomiting, and gastrointestinal effects. Nystatin causes changes in the permeability of the fungal cell membrane which leads to the penetration of the drug into the cell and finally causing fungal cell death.[11] Nystatin tablets 500,000 units, dissolved in the mouth, 3 times a day for 14 days Nystatin 100,000 IU/ml, 5 ml 4 times daily. Topical therapy is the first-line treatment. The use of clotrimazole or nystatin lozenges, is recommended. The application of anti-fungal agents (eg, nystatin powder or cream) on the tissue-contacting surface of the denture is also recommended. In cases that fail to respond to the usual treatments, consider the role of systemic disease. Other topical agents used are Miconazole, Amphotericin-B, Fluconazole, Clotrimazole, Ketoconazole, Chlorhexidine and Propolis.[12]

Recently some herbal extracts have also shown promising results such as Green tea extract, Garlic extract, Punica granatum fruit extract, Garcinia kola extract, Pelargonium graveolens essential oil, Satureja hortensis essential oil and Zataria multiflora boiss essential oil.[12]

In case of chronic stomatitis where the patient has new dentures that are clinically good but continues to have decubital ulcer that develop long after adjustment period. It can be done with steps including accurate impression made with a minimum of pressure. recording jaw records, an occlusal pattern that shows equalised contacts in centric relation free of interfering cusps, Non interfering anterior teeth, Meticulous oral hygiene, Avoidance by the patient of habits that increase the tendency to crush the mucosa between the bone and the denture base, 8 hours of rest daily for the tissues by leaving dentures out of the mouth.[13,14]

CONCLUSION

The denture stomatitis is localized condition. It is secondary to prosthetic treatment. The severity varies, symptoms also varies. The main concern should be to focus on the prompt treatment, and not to miss the rule out or treat the underlying systemic disease. Following this protocol can help to fullfil the deVans Statement of perpetual preservation of what is remain.

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