Annals of R.S.C.B., Vol. 24, Issue 1, 2020, pp. 1036 - 1039
Received 18April2020; accepted 23June2020

A Systematic Approach Towards The Role Of Iatrogenic Factor Influencing The Periodontium

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ABSTRACT
Bacterial plaque, combined with other predisposing factors, is the primary cause of gingival inflammation. Calculus, malocclusion, defective restorations, orthodontic therapy difficulties, self-inflicted traumas, cigarette use, and radiation therapy are all risk factors. Defective dental restorations and prostheses contribute to gingival irritation and periodontal damage. Iatrogenic factors are ineffective dental procedures that contribute to periodontal tissue deterioration.

KEYWORS: Iatrogenic factors, Periodontium, Prosthetic Restorations, Malocclusion

I. Introduction

Iatrogenic" is derived from the Greek words "Iatros" and "Gennan," which both mean "as a result." "Primum non nocere," Hippocrates warned his pupils (first, do no harm). Iatrogenic factors are ineffective dental procedures that contribute to the degeneration of periodontal tissues. The relationship and interaction between periodontics and restorative dentistry can be seen in a variety of ways, such as the position of restorative margins, crown shapes, and gingival tissue response to restorative preparations. Black A. first established the link between iatrogenic causes and periodontal deterioration in 1912.

II. Prosthetic and restorative considerations:

Restorations and detachable partial dentures should have the following characteristics to maintain periodontal health: The gingival margin's relationship to the restoration, The distance between the restoration's edge and the unprepared tooth. The shape of the restorations, The occlusion, on the other hand, The materials that were utilised in the restoration The actual restorative treatment, The RPD was created in a unique way.

III. Margins of restorations

Waerhaug et al. (1957) were the first to show that dental restorations put below the gum line were harmful to periodontal health. By altering the ecological balance of the gingival sulcus and favouring more disease-associated organisms, overhanging margins of dental restorations contribute to the development of periodontal disease. preventing the patient from removing accumulated plaque A statistically significant link has been shown between marginal abnormalities and decreased bone height. Overhangs are removed, allowing for better plaque control, a reduction in gingival irritation, and a slight increase in radiographic alveolar bone support.. The health of neighbouring periodontal tissues is intimately related to the position of the gingival edge for a repair.

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Severe gingivitis, subgingival margins Hyperplasia, engorgement of the marginal gingiva, and deeper pockets are all symptoms of hyperplasia. If implanted subgingivally, even high-quality restorations will result in the following alterations. At the level of the gingival crest, margins cause less acute irritation. Supragingival margins are linked to periodontal health in the same way that non-restored interproximal surfaces are.

IV. Margin placement guidelinesplacement:

Rule 1: Place the restoration margin 0.5 mm below the gingival tissue crest if the sulcus probes 1.5 mm or less.

Rule 2: Place the edge half the depth of the sulcus below the tissue crest if the sulcus probes more than 1.5 mm.

Rule 3: If a sulcus of more than 2 mm is discovered, consider having a gingivectomy to extend the teeth and generate a 1.5-mm sulcus. The patient can then be treated according to Rule 1.

V. Biologic width violationsguidelines:

Surgically removing bone from close proximity to the restoration margin can rectify biologic width abnormalities. Extruding the tooth orthodontically and thereby shifting the border away from the bone. The faster of the two therapy choices is surgery. Plaque development and consequent gingival inflammation are thought to be exacerbated by roughness in the subgingival area.

Sources of marginal roughness include the following:

Grooves and scratches in the surface of acrylic resin, porcelain, or gold restorations that have been meticulously polished. The restoration margin and luting material are separated from the cervical finish line, exposing the prepared tooth's rough surface. Between the preparation and the restoration, the luting material dissolves and disintegrates, leaving a void. Inadequate marginal fit of the restoration.

VI. Over hanging restoration:

Periodontitis is a complex condition with several causes. Because of their retentive potential for bacterial plaque, overhanging interproximal restorations are thought to contribute to gingivitis and periodontal attachment loss by generating gingival irritation (Gilmore et al., 1971).

VII. Contours and open contacts:

Overcontoured crowns and restorations tend to collect plaque and may inhibit the neighbouring cheek, lips, and tongue from self-cleaning. Papillary inflammation is linked to restorations that do not reestablish enough interproximal embrasure gaps. Undercontoured

crowns that lack a protective height of contour during mastication may not be as harmful as previously considered.

VIII. Design of removable partial dentures:

Following the placement of partial dentures, plaque accumulates, causing abrasion of the abutment teeth, and movement of the abutment teeth. Periodontal pocket development, gingival inflammation Occlusal trauma is a common complication of improperly designed clasps. The clasp's arms may irritate the marginal tissue. As a result, check RPD for morphological changes caused by progressive alveolar bone resorption on a regular basis.

XI. Restorative procedures

The use of rubber dam clamps:

Bands in a matrix

Burs causes mechanical damage and inflammation in varied degrees.

Despite the fact that such injuries usually heal, they are a source of pain for the sufferer.

The periodontium may be mechanically injured if a gingival retraction cable is pushed too far into the sulcus, leaving impacted debris that might cause a foreign body reaction.

X. Malocclusion

Plaque control may be more difficult if teeth are not aligned properly, as in situations of malocclusion. Several studies have discovered a link between crowding and periodontal disease. Buckley and colleagues (1972). Recession is common in the roots of teeth that are prominent in the arch or are associated with a high frenal attachment and modest amounts of connected gingiva.

XI. Periodontal complications associated with orthodontic therapy

Orthodontic therapy can have a negative impact on the periodontium by encouraging plaque retention, hurting the gingiva directly as a result of overextended bands, excessive stresses, unfavourable forces, or both on the tooth and supporting tissues.

XII. Extraction of impacted third molar

Extraction of impacted third molars frequently results in vertical abnormalities distal to the second molars, according to numerous clinical investigations.This iatrogenic impact has nothing to do with the flap design: It appears to affect people above the age of 25. If there is a visible plaque, On probing, I was bleeding profusely. In the contact area between the second and third molars, root resorption occurs. A pathologically enlarged follicle is present. Third molar inclination, proximity of the third molar to the second molar

XIII. Habits and self inflicting injuries

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Patients may be unaware of their harmful self-inflicted habits: Improper toothbrush use, for example, might cause mechanical trauma. Using toothpicks to wedge between the teeth, Applying pressure on the gingiva with your fingernails Other factors include burns from hot foods such as pizza.

XIV. Chemical irritation

Aspirin, cocaine, and other caustic drugs are applied topically. Allergies to toothpaste and chewing gum are common. Chewing tobacco use, Mouth rinses with a high concentration

XV. Conclusion

Existing pathologic conditions must be diagnosed and addressed prior to any dental procedure, with the exception of treatment of acute carious lesions that affect or threaten the health of the pulp. Prior to any additional dental treatment, the periodontium must be restored to health. Gingival irritants are removed, functional and occlusal interferences are corrected, morphologic and pathologic gingival abnormalities are treated, and bone deformities of the supporting periodontium are corrected.

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