

Dental Food Impingement is Compensatory with Proper Restoration-A Clinical View

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Summary

Major oral discomfort related to periodontal diseases, pain, halitosis, gingivitis, hypersensitivity, cervical caries, and gingival recession; altogether is the part consequences of food impingement/impaction. Dentistry should deal with rebuilding the proper anatomy of teeth in case of direct or indirect restoration which can ultimately resolve the problem along with proper periodontal treatment.

Keywords: Dental restoration; food impingement/impaction; periodontal treatment

Problem statement

Impingement of food particles is a high incidence phenomenon among dental patients. A retrospective case analysis revealed food impingement always happens in proximal sites of dental prosthesis along with a rate of 15.9% case where 89 cases were found out of 561 patients on the mesial side and 11.6% on the distal side. Lower jaw frequency was 70 cases out of 456 patients was 15.4%, but the same study revealed at upper jaw (maxillary) cases were 13.2% which was lesser than the lower jaw (mandibular) region. The prevalence of the posterior region (premolar & molar) (15.4%) was higher than the anterior (incisor to canine) segment (12.1%) of the jaw [1].

So, food impaction is frequently occurring in loss of proximal contact integrity. Tooth movement either physiological or orthodontic or after initiation of tooth decay and minor injury are the common reason. It also happens in defective contour and diminished marginal ridges in consort with the absence of papilla fill after even direct and indirect restoration. Eventual fate would be periodontal diseases, tooth sensitivity swelling, gum recession and infection, hot tooth, foul breath, gingivitis, caries in the cervical region, may insult the pulp, and ultimate tooth loss [2].

An intact proximal contact has a major role in preventing forceful food wedging between the adjacent teeth by shunting the food towards the buccal and lingual areas. The absence of contact is an unsatisfactory proximal relationship that is conducive to food impaction. An annoying dense plunger cusp likewise forces the food into the opposite interproximal space. The missing tooth could cause the teeth movement from their normal occlusal pattern, which may produce a plunger cusp [3].

Excessive anterior overbite usually creates pressure over lower front teeth during food intake which yields to pressure food lodging into the lower labial surface area of anterior teeth space and may produce gum recession with gingival embrasures enlargement, it

also causes a varying degree of gum infection due to frequent food impaction on the inner side of the upper teeth. Impacted wisdom or third molar-related food impaction also produces painful pericoronitis [3].

The obese person with fatty lips, cheeks, and enlarged tongue (macroglossia) also produce lateral pressure which can force food between the molar teeth area and cause it to remain there and produce unwanted discomfort. Any kind of decay on the surface of the tooth or between two adjacent teeth that get collected food particles causes tooth sensitivity, pain, and discomfort on chewing. Wedging of food particles between teeth also happens in tooth decay [3].

In these regards, we found:

- A. Two types of food impaction according to the way of entry [4]:
 - i) Vertical
 - ii) Horizontal / Lateral
- B. Based on clinical observation:

According to area involvement

1. Food impaction at a Contact point or above the contact point area including occlusal embrasure.
2. Food impaction in Gingival embrasure without the involvement of periodontal pocket.
3. Food impaction in the periodontal pocket.
4. Food impaction under dental prosthesis, implant, or under pontics/ clasp.

How to get rid of it? – A clinical recommendation

Proper evaluation of the case is compulsory. It can be done by the analysis of radiograph and model.

Affected periodontal and gingival treatment is essential and relevant surrounded soft tissue pathology should be corrected along with the proper morphological rebuild-up of teeth by restoration.

Periodontal diseases like pocket should be treated with proper periodontal dressing which improves the periodontal and gingival health as well as healthy gingival embrasure. Macroglossia, buccal pad of fat can be treated by surgical procedure or with the preventive myo-functional appliances. Surgical removal of the wisdom tooth may reduce the food impaction in the related region.

Then crucial management can be done in a direct or operative or conservative way and an indirect or non-conservative way. In case of direct or indirect restoration, should maintain proper morphological tooth structure including contour, contact point, embrasure, occlusal margin, groove, cusp, fossa, etc.

Reproducing the proper contact areas, contours, and marginal ridges is essential for good dental restoration. Restorations with contact areas that are flat, open, improperly placed, rough, or poorly polished will lead to failure which might facilitate the food impingement. Tooth crowns contours in the forms of convexities and concavities which should be reproduced in direct or indirect restorations. The lack of marginal ridge or marginal ridge with inappropriate height can lead to altering the masticatory forces which are injurious to the underlying periodontium [5].

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