

Oral Care of the Geriatric Patient

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Abstract

: A geriatric patient is prone to a number of oral health problems like loss of teeth, xerostomia, mucosal alterations and others. The oral functions need to be restored. Prosthesis like RPD, FPD, CD can be used for restoring oral functions. However, all these require maintenance and care. This article deals with various techniques for oral health care in elderly and also emphasizes on the need for oral health education to the elderly population.

Keywords: Geriatric, Complete denture, oral health.

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INTRODUCTION

Plaque control is begun with proper motivation and instruction of the patient and supported by an individual recall system for professional oral hygiene. Most elderly patients respond favorably to education in oral hygiene. It should be realized, however, that general conditions of life may suddenly change due to disease or altered living conditions. These situations may result in total neglect of oral hygiene, followed by rapid destruction of teeth by caries. In such situations, patients need professional care more often, such as monthly.

The recall of patients treated with fixed or removable partial dentures focuses on the following:

- To control plaque development on tooth surfaces and prostheses. Plaque formation is particularly extensive on tooth surfaces adjacent to pontics and denture bases in contact with clasps and rests, and on the fitting denture surface.
- To control development of functional disorders of the masticatory system resulting from changing occlusal relationships due to wear, mechanical failures, or resorption of the residual ridge.
- To prevent mechanical injury to periodontal and denture-bearing tissues.

Fixed Partial Dentures [1-3]

Recall and maintenance procedures for patients with fixed partial dentures are directed at preventive measures for periodontal health, control of

dental caries, endodontic reevaluation, esthetic evaluation, and checks for mechanical failures and occlusal conditions. Particular attention should be paid to ensure that no cementation failures or debondings have taken place, promoting the risk of caries to the abutments. A maintenance and recall plan should be based on:

- The patient's oral hygiene performance.
- The complexity of the fixed partial denture.
- The area of exposed root surface
- Periodontal disease activity.
- Occlusion and occlusal activity

Normally, a patient recall should take place in 6 to 12 months, but if the patient presents important risk factors, recalls should take place more frequently.

Oral hygiene instructions should take into account the design of the pontic, the anatomy of the embrasure space, and the level of the crown margin. When there is no contact between the pontic and the ridge mucosa, the pontic can usually be entirely cleaned with a toothbrush or a single interspace brush. With slight mucosal contact or dome-shaped pontics, the interproximal area and the undersurface of the pontic can be cleaned using an interspace bottle brush.

With marked contact between the pontic and the mucosa, it is necessary to use regular floss or superfloss. It is important, to maintain healthy periodontal conditions of abutments for fixed partial dentures, that the tooth surfaces and the under surface of the pontic are kept clean. Because dental floss is usually difficult for older people to manipulate, fixed

partial dentures should be designed with "wash-through" or dome-shaped pontics, to allow cleaning with a single inter space brush or an inter space bottle brush. The design also should include open embrasure spaces.

Removable Partial Dentures

Recall and maintenance procedures of wearers of removable partial dentures are preventive measures related to periodontal health, control of dental caries, and mechanical initiation of the oral mucosa by the denture, occlusal conditions, and mechanical failures. Particular care should be taken to ensure that no fractures of occlusal rests or minor connectors have taken place, and that the abutments present no caries. In wearers of removable partial dentures, the risk of root caries is important. Thus, elderly patients with removable partial dentures have an increased prevalence of gingival recession and exposure of the root surface. Indeed, the abutment surfaces are more likely than non abutment surfaces to have exposed root surfaces when a removable partial denture is present, and they are twice as likely to have root caries. The carious lesions on abutments are likely to be active, and the lesions are generally larger than those on non abutment surfaces. Furthermore, root caries and periodontal disease are more frequent when removable partial dentures are defective.

A maintenance and recall plan should be established based on:

- The patient's oral hygiene performance.
- Gingival recession and the area of exposed root surface
- Caries and periodontal disease activity.
- The rate of residual ridge resorption.
- The design of the removable partial denture

Recalls should normally take place every 6 to 12 months, but more frequent appointments may be indicated. When changes occur in the residual ridge, appropriate relining procedures should be employed to reestablish the fit of the denture base and the occlusion. It often is necessary to remount the dentures on an articulator to adjust the occlusion, or to replace worn denture teeth.

Another indication for modifying the denture may be that periodontally compromised teeth have been maintained to respect the patient's demand. If the framework has been designed to accommodate the addition of denture teeth, recalls for making the modifications should be planned accordingly. Oral hygiene instructions should take into account the distribution of the natural teeth. Generally, the clinician should not introduce new brushing techniques to older patients who may have difficulty in using them. However, special brushing techniques are essential to control plaque on tooth surfaces adjacent to denture bases and the corresponding denture surfaces.

Furthermore, in caries-susceptible patients, mouth rinsing with fluoride solutions or topical treatment of exposed tooth surfaces with fluoride or chlorhexidine may be indicated.

Patients should be informed that not wearing the denture at night is a preventive measure for caries and periodontal disease. However, this precaution cannot be applied generally, because many patients find it uncomfortable to leave their dentures out at night.

Overdentures

Recall and maintenance procedures for wearers of overdentures comprise preventive measures related to periodontal health, control of dental caries, stability of the denture, and occlusal conditions. The wearing of overdentures is particularly associated with a high risk of caries and progression of periodontal disease of the abutment teeth. One of the reasons for this is that bacterial colonization beneath a close-fitting denture is enhanced, and good plaque control of the fitted denture surface is generally difficult to obtain.

In maintaining the periodontal health of overdenture abutments, a fluoride gel is ineffective, whereas application of both chlorhexidine gel and varnish was relatively effective. In addition, not wearing the dentures at night is beneficial to the health of the periodontal tissues. In this way, the microbial plaque is less readily established and saliva, with its buffering capacity, antibacterial systems, and antibodies has free access to the abutments.

Treatment of superficial caries on overdenture abutments includes polishing and application of fluoride-chlorhexidine gel or varnish. Placement of fillings should be restricted to the root canal opening and deep caries. The mean survival rate of amalgam and composite resin restorations is significantly longer than that of glass ionomer restorations. The placement of copings that cover the exposed dentin and root surface, with subgingival margins, is indicated when it is not possible to control caries by more conservative means.

Periodontal maintenance measures include polishing, subgingival scaling, and application of chlorhexidine gel or varnish, if the patient has difficulty maintaining appropriate oral hygiene. Periodontal pockets greater than 4 to 5 mm should be eliminated surgically, because they present a risk of acute periodontal complications.

At the regular recall, it is important to check that the adaptation of the denture base is adequate, so no excessive rocking can take place around the abutments. To correct adaptation problems, a selective, direct relining with visible light-curing composite resins is a cost-effective procedure. Attachment-retained

overdentures must be checked, and attachments adjusted or replaced as necessary.

Implant-Supported Prostheses

Meticulous oral hygiene self care is essential in maintaining dental implants since plaque and calculus accumulate more rapidly on the implant surface compared to the tooth surface [4].

Soft manual toothbrush can be used. The counter rotational powered toothbrush has shown to be effective in implant maintenance [5].

Dentifrice used should meet the ADA standards to ensure that it is not abrasive [6].

The use of fluoride containing dentifrices prevents plaque accumulation and thereby reduces the chance for premature failure of implants. Twice daily use of triclosan/copolymer dentifrice may enhance dental implant maintenance by reducing dental plaque and gingival inflammation [7].

An established recall/maintenance plan for an implant -supported fixed or removable prosthesis may require recall every 4 to 6 months, depending on the type of implant support and prosthesis. Regarding oral hygiene, the same principles can be followed as those used for conventional fixed or removable dentures (i.e., a single interspace brush or an interspace bottle brush around the implants and dental floss or superfloss).

In patients who have difficulty maintaining proper oral hygiene, daily mouth rinses with chlorhexidine gluconate are necessary. Dentists must remove hard deposits with special polymeric-based instruments to avoid scratching or contaminating the relatively soft titanium surface by contact with another metal.

At recall appointments, it is important to verify the integrity of the connection between the implant abutment and the supra structure by prying the prosthesis upward with an instrument. Movement indicates fracture or loosening of a screw, or a failure of the cement bond. Radiographs also should be taken once a year to assess any peri-implant changes and the connection between the implant screw and the abutment.

Complete Dentures

Plaque formation on the fitting surface of removable dentures is the principal cause of denture stomatitis. This infection is often caused by Candida, but other bacteria also may be involved. Thus, the denture plaque is mainly composed of bacteria. However, the concentration of yeasts in the plaque is about 100 times higher in patients with denture stomatitis than in denture wearers with healthy oral mucosa.

To maintain healthy oral mucosa and obtain a long lasting cure from antimycotic therapy in patients with Candida-associated denture stomatitis, plaque control is very important. Plaque accumulation, when in contact with the oral mucosa for prolonged periods of time, induces mucosal alterations, as in periodontitis patients. When plaque accumulation is prevented, mucosal health improves. There are three ways to control plaque on the fitting denture surface: mechanical plaque control, chemical plaque control, and adequate denture-wearing habits.

The patient should be instructed to remove the denture after every meal, if feasible, and scrub it with soap or nonabrasive dentifrice before reinserting it. The mucosa contacting the denture also should be kept clean and brushed with a soft toothbrush. Although maintenance of appropriate denture hygiene is important, both from an aesthetic point of view and for mucosal health, denture wearers generally have poor oral hygiene practices, they are often apathetic regarding denture hygiene, and it is difficult to change their denture wearing and cleansing habits through verbal or written instruction

CONCLUSION

A geriatric patient is prone to a number of oral health problems. Loss of teeth is most common oral health problem. The use of prosthesis like complete dentures, RPD, FPD helps to restore oral functions. These prosthesis needs to be cared so that functions can be restored for a longer time. Dental health education in elderly is very important and effective policies needs to be drafted for improving oral hygiene status.

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