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MAINTENANCE OF DENTAL IMPLANTS: A REVIEW

Dental Science

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ABSTRACT

The changing pattern of tooth loss influences the use of dental implantology. With the predictable results that can now be achieved using dental implants, it is necessary to consider dental implants as an option in all treatment plans that involve tooth replacement in any form. Dental implant is, infact, a replacement for a missing tooth root, which undergoes prosthetic reconstruction once healing is complete. General oral hygiene levels must be brought up to an acceptable level prior to dental implant surgery and maintained throughout, during and after implant treatment. The overall periodontal health before and after dental implant treatment is essential in the success of any osseointegration implant therapy.

KEYWORDS

Implants, maintenance, Oral Hygiene

INTRODUCTION

Dental implants are small titanium metal screws that are placed into prepared sites in the jaw bone where they become solidly integrated with the bone. The implant can then be used to support crowns, bridges and dentures, eliminating the need for conventional dental plates or multi-unit bridges[1].

The short term success of the endosseous dental implant has been made possible by the implantologist's incorporation of surgical techniques that do not cause irreparable tissue damage and by the use of implant materials and devices that possess optional biomechanical and chemical properties. Their long-term success, however, will most likely be patient dependent, reflecting the patients ability and willingness to control etiological factors responsible for the onset and progression of peri implantitis[2].

A prerequisite to successful endosseous dental implant should be obtaining a perimucosal seal of the soft tissue to the implant surface. Failure to achieve or maintain this seal result in the apical migration of the epithelium in to the bone implant interface and possible complete encapsulation of the root portion of the implant system[2].

Contrary to many patients expectations, implant surgery rarely causes much more than moderate dis-comfort. This is a reflection of the care required when handling the tissues, as excessive damage to the bone or soft tissue will risk failure of the implants.

If a well documented implant system is used, it is usual to expect a success rate in excess of 95%, though this can vary according to the bone quality and quantity available.

Successful implant maintenance requires a commitment from the patient, and close communication between the dental team. The implantologist and periodontist need to communicate at all stages of treatment in order to maximize the patients compliance in maintaining healthy implants.

MAINTENANCE BY THE DENTIST

- The patient must be brought to a level of oral hygiene suitable for surgery and the long-term success of implants[3].
- Observe the mucosa around the implants, colour, contour and consistency should be healthy. No suppuration should be evident. Note the patient's OH status with plaque scores and bleeding scores. Reinforce and motivate OH procedures.
- Marginal probing around the sulcus area will indicate the presence of soft tissue inflammation or peri-implant mucositis. Periodontal probing remains a simple and effective method of monitoring and assessing gingival health[4].
- Scale if calculus is present. Titanium is soft metal, easily scratched by incorrect instruments. Where as titanium alloy is harder and will tolerate commercial scalers. If you are unsure of the metal used, it is probably best to stick to implant scalers.
- Prophylaxis can be carried out with low abrasive paste, and a rubber cup. Ensure that the rubber cap has not previously been used with a course abrasive or pumice. A new cup would be preferable.
- Check for mobility. This may indicate loosening of component parts, or a failing implant.
- Observe any changes in osseous topography with radiographs[5].
- Motivation is a very important part of the routine appointment to ensure the patient is using the right products in the right place in the most effective way. On every appointment patients should be demonstrated and motivated about the OH procedures.

MAINTENANCE BY THE PATIENT

Oral hygiene techniques are similar around implants as around the natural dentition. Brush twice a day with a small-headed multi tufted toothbrush using the bass technique. The toothpaste should be low abrasive. An electric toothbrush can be of great value to patient with poor dexterity. A very good choice for well motivated capable patients with single implants. The floss must be adopted to the abutment and plaque removed in a coronal direction. The advantage of floss is that the soft tissue contour in not compromised. Super floss should be used for cleaning dental bridges and is equally useful for implant supported bridge work. Probably the easiest product for the patients to use. The correct size must be used to fit the space between the implants without causing trauma to the gingivae. The brush is then used with gently back and forth movements to clean the restoration. 1% Chlorhexidine gel can be applied with these brushes at different time to using conventional toothpaste.

The choice of oral hygiene product for any patient with implants will be unique to that patient. The definitive routine should be carefully worked out between the dentist and patient. Patient must be advised to;

- Brush all aspects of the crowns and bridge.
- Brush the area where the gingivae meets the abutment.
- Use floss/tape in a polishing action on abutments.
- Use floss/tape for overdenture attachment in polishing action.
- Carefully clean attachments of removable prosthesis and care for any natural dentition.

RECALL VISITS

Long-term clinical studies of treated periodontal patients have shown that reinforcement plaque control practices and the professional removal of plaque and calculus deposits at regular 3 months intervals can prevent the further loss of periodontal attachment in most patients. It is generally agreed that patients with dental implant should be provided maintenance care at 3 months intervals. Each maintenance care appointment should include the following components;

- The health of the peri implant tissue should be evaluated.
- The patient's Oral hygiene practices should be evaluated and reinstructions provided as necessary.
- All plaque and calculus deposits should be removed by scaling and polishing.
- Restorative and prosthetic dental treatment should be evaluated.[6]

CONCLUSION

Methods for maintaining your patient's implants must be based on the individual needs of the patient. Plaque control must be of the highest standards in order to preserve the long-term success of the treatment.

Essentially the techniques to maintain implants are the same as around natural dentition. Patients need inspiration, motivation and support to maintain their implants.

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