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Commentary

Pathophysiology and Treatment of Periodontal Diseases

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DESCRIPTION

Periodontal diseases are the chronic bacterial infections that affect the gums and bones supporting the teeth. These range from simple gum inflammation to serious disease those results in major damage. Symptoms include bad breathe, red or swollen gums, tender or bleeding gums, pain during chewing, loose and sensitive teeth, etc. These are commonly of 2 types namely gingivitis and periodontitis.

Gingivitis is the early stage of the disease. Red, swollen and bleeding gums are observed. Usually it can be reversible through good oral hygiene and preventive care. Periodontitis is the advanced stage of the disease. Chronic inflammatory response leads to irreversible destruction of tissues and bone that supports the teeth. Treatment requires more surgical care.

The bacteria present in the mouth along with mucus and other particles, constantly form a sticky, colorless plaque on teeth leading to the cause of the disease. Brushing and flossing help to get rid of plaque. Plaque which is not removed becomes harden and form tartar which brushing doesn't clean. Only a professional dentist can remove the tartar. Risk factors includes smoking, hormonal changes in women, diabetes, other disease treatments like use of cancer treated medicines can also significantly affect the health of gums in mouth.

Treatment

It includes 3 methods such as deep cleaning (scaling and root planning), medications and surgical treatment.

Deep cleaning: The periodontist or dental hygienist removes the plaque through a deep cleaning method called scaling and root planning. Scaling means scraping off the tartar from above and below the gum line. Root planning gets rid of rough spots on the tooth root where the germs gather and helps remove bacteria that contribute to the disease. In some cases, a laser may be used to remove plaque and tartar. This procedure can result in reduced bleeding, swelling and discomfort when compared to other traditional deep cleaning methods.

Medications: It includes the use of antimicrobial mouth rinser, antibiotic gel, enzyme suppressants, oral antibiotics, etc.

Prescription antimicrobial mouth-rinse: A prescription mouth-rinse contains an antimicrobial called chlorhexidine is used to control bacteria when treating gingivitis and after gum surgery. Also used like a regular mouthwash.

Antiseptic chip: A tiny piece of gelatin filled with the medicine chlorhexidine is used to control bacteria and reduce the size of periodontal pockets. After root planning, it is placed in the pockets where the medicine is slowly released over time.

Antibiotic gel: It contains the antibiotic doxycycline. Controls bacteria and reduces the size of periodontal pockets. The periodontist places it in the pockets after scaling and root planning. The antibiotic is released slowly over a period of about seven days.

Antibiotic microspheres: These are the tiny; round particles that contains the antibiotic minocycline. It controls bacteria and reduces the size of periodontal pockets.

Enzyme suppressants: A low dose of doxycycline keeps a check in destructive enzymes. These control the body's enzymes. If not, these can break the gum tissue.

Oral antibiotics are used for the short term treatment of an acute or locally persistent periodontal infection.

Surgical treatment: Flap surgery is performed to remove the tartar deposits in deep pockets or to reduce the periodontal pocket and make it easier for the patient and dentist to keep the area clean. This common surgery involves lifting back the gums and removing the tartar. In bone and tissue graft surgery, dentist regenerates any bone or gum tissue which is lost due to periodontitis.

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