2017 SEOUL KOREA APSP

Program & Abstracts

12th Asian Pacific Society of Periodontology Meeting
in conjunction with the 57th General Session of Korean Academy of Periodontology

Contemporary Concepts in Periodontology and Implant Dentistry

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Seoul, KOREA

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12th APSP SEOUL 2017

Welcome Letter

Dear colleagues and friends

The Asia Pacific region is the most populous region, accounting for about 60% of the world's population. Thus, the level of oral health in the region, in particular periodontal health, reflects the level of the whole world. In reality, however, there is a wide disparity in oral health level by region, and even some areas have very limited access to basic periodontal care.

On the other hand, the recent claims have been made that periodontal disease and systemic health are closely interrelated, and that periodontal disease should be managed as a non-communicable disease (NCD). United Nations and the World Health Organization, and international organizations related to dentistry, such as IADR and FDI, have been responding on this notion and actively encouraging other countries to cooperate.

In addition, the demand for periodontal treatment is becoming high with the rapid increase of the elderly population in many countries including South Korea. Therefore, it is of significant opportunity that the Asian-Pacific periodontists gathered at this time to hold an academic conference to share and explore academic achievements.

The theme of this meeting is "Contemporary concepts in periodontology and implant dentistry" and the scientific program will showcase the cutting edge advances in the specialty and highlight best researches from member countries. New basic and clinical research findings presented will enhance your knowledge and help you improve the health of your patients.

We sincerely welcome you to participate in the 12th APSP Seoul Meeting.

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Yulianti Kemal *President of APSP*

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Patient Regenerative Care Prosedure with Periodontal Abscess: Case Reports

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Introduction

Odontogenic abscess belongs to the group of acute infections originating from the teeth and/or periodontium. This abscess is related to a variety of symptoms, including local purulent inflammation in the periodontal tissues which causes pain and swelling. Abscess is one of the main causes for patients to seek emergency care at a dental clinic. Depending on the origin of infection the lesion can be classified as pericoronal abscess, periapical abscess, and periodontal abscess.[1]

Periodontal abscess is localized purulent inflammation of the periodontal tissues which can cause mobility to tooth loss.[2] Periodontal abscess is a common in patients with deep pockets and purulent material trapped in pockets without a pathway for drainage.[3] Approximately 8-14% of all dental conditions those who need emergency treatment are cases of periodontal abscess.[1] A periodontal abscess is also known as a lateral abscess or parietal abscess. This periodontal abscess is more prominent in periodontitis patients. Periodontal abscess is more likely to have a pocket. Pocket looks deeper than 6 mm in 62.1% cases while 4-6 mm in 34.4% cases.[4]

After the infiltration of pathogenic bacteria into the periodontium tissue, bacteria and or its products initiate the inflammatory process resulting in activation of the inflammatory response. Tissue damage is caused by inflammatory cells and extracellular enzymes. When

inflammation is formed, this process is followed by destruction of the connective tissue. Encapsulation of bacterial mass occurs and pus formation takes place. Tissue-lowering resistance and virulence and the number of bacteria present determine the course of infection. The entry of bacteria into the soft tissue wall begins periodontal abscess formation.[5]

Periodontal abscess can be classified into 2 types based on the progression of the disease, including:

1. Acute periodontal abscess: An abscess that develops in a short time and lasts for several days or weeks. Acute abscess often appears suddenly and experience pain when biting and feeling throbbing. The gingiva becomes red, swollen and sore. In the initial stage, there is no fluctuation or discharge of pus, but with the development of the disease, pus will flow from the gingival gap.[4]

2. Chronic periodontal abscess: The abscess develops slowly and lasts for a long time. In the chronic stage, spontaneous pain and bleeding can accompany discomfort. The adjacent teeth sometimes become mobile. Pus may be seen from the gingival gap or from the sinuses in the mucosa that line the affected root. Pain is usually in low intensity.[4]

Abscessed periodontal disease is often characterized by alveolar bone resorption, damage to the periodontal ligament and cementum, and tooth mobility which is a major cause of tooth loss in adults.[6] Therefore, to regenerate the lost periodontal tissue structure, regenerative material like bone graft through periodontal surgery. Nevertheless, the success of periodontal abscess treatment is greatly influenced by diagnosis, appropriate treatment, and maintenance phase.

Case Reports

A 59-year-old woman came to a periodontal specialist clinic with complaints that the anterior teeth of mandibular were mobile and hurt when biting. The gums look swollen with shiny red on the mobile teeth and sometimes bleed suddenly. This condition has long been felt by patients. Patients do not have systemic disease.

Clinical examinations of teeth 31, 32, and 41 showed gingival swelling, pus, grade 3 of mobility, and localized pain. Radiographic examination revealed radiolucent features involving alveolar bone loss up to 2/3 root teeth in 31, 32, and 41 (Figures 1 and 2). Malaise, fever, and lymphadenopathy were not identified during systemic condition assessment.

Figure 1. Clinical appearance of periodontal abscess at 31, 32 and 41

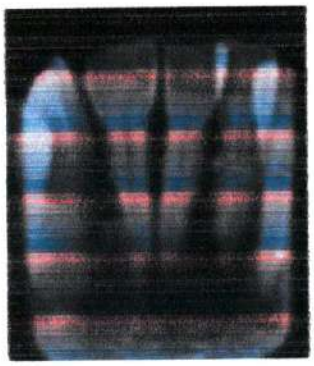

Figure 2. Periapical photos appear radiolucent in 2/3 alveolar bone at 31, 32 and 41

Case Management

Case management includes non-surgical and surgical treatments. Non-surgical treatments, such as scaling and root planning (SRP) are followed by an occlusal adjustment

(Figure 3) in teeth that have heavy contact (31, 32, and 41), to reduce traumatic occlusion. Surgical treatment begins with local anesthesia under asepsis (Figures 4 and 5), then a broad crevicular incision is made from teeth 31, 32, to 41 using a scalpel No.12 (Figure 6). The full thickness mucoperiosteal flap is elevated to provide visual access and instrumency (Figure 7).

Debridement was followed by root planning using Gracey curette No.1-2 on the roots of 31, 32 and 41 teeth followed by 0.9% NaCl irrigation (Figure 8). Placement of the "Gamacha" bone graft in the boneloss area (Figure 9) followed by flap closure and suturing (Figure 10). The next is Installation of the COE pack in the area around the flap (Figure 11). Patients were given postoperative instructions and prescribed antibiotics, analgesics, and chlorhexidine mouthwash. Patients were asked to periodically control 1 week, 2 weeks, 1 month, and 3 months (Figure 12) as part of the maintenance program. Tissue repair and reduction of tooth mobility have given satisfying results for patients.

Figure 3. *Occlusal adjustment*

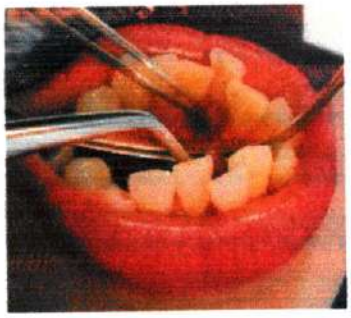

Figure 4. Disinfection of the abscess area

Figure 5. Use of local anesthetics.

Figure 6. Incisions using blade No.12

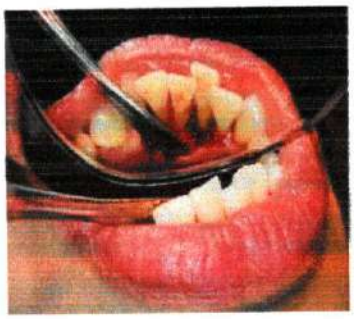

Figure 7. Opening of a flap

Figure 8. Curettage using a Gracey curette

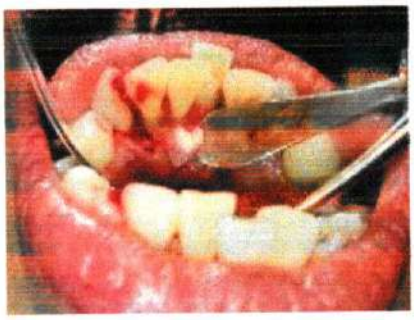

Figure 9. Placement of "Gamacha" bone graft

Figure 10. Flap closure with suture

Discussion

One of the goals of periodontal abscess treatment is to reduce acute signs and symptoms. Non-surgical treatments such as scaling and root planning need to be carried out with caution because they can cause iatrogenic hazards which can cause periodontal abscess in unsafe scaling. In addition, the dangers that can be caused such as bleeding, pain, swelling, teeth mobility, infection, and gingival recession can lead to more sensitivity of the teeth.

For periodontal regenerative processes, the material often used is bone graft. These bone graft materials generally have osteogenesis, osteoinductive and osteoconductive

properties. Osteogenesis is the formation or development of new bone by the material contained in the graft. Osteogenesis occurs when vital osteoblasts derived from bone graft material contribute to new bone growth along with bone formation. While osteoinductive is a chemical reaction by molecules in a graft that converts neighboring cells into osteoblasts and then becomes bone-forming. Osteoconductive is a physiological effect of the matrix in the graft material, where the graft becomes the base which then attaches to the cell and forms new bone.

Osteoinduction involves stimulating osteoprogenitor cells to differentiate into osteoblasts and then initiate new bone formation. Osteoconductive and osteoinductive bone graft materials not only function as scaffolds for osteoblasts that exist but will also trigger the formation of new osteoblasts, which encourage faster graft integration.

In this case, a "Gamacha" bone graft is used which is an alloplastic bone graft material. The main content of "Gamacha" is type B carbonate apatite which is also a constituent material for human bones. "Gamacha" bone graft has excellent osteoconductive properties so it can accelerate new bone growth quickly. After postoperative control, the patient showed tissue repair which was characterized by reduced degrees of tooth mobility and normal clinical appearance.

The success of periodontal disease treatment requires a maintenance procedure to improve treatment outcomes. This maintenance also prevents the development of new diseases after treatment. Microbial recolonization of residues from the teeth surface will occur after the plaque is removed. So as to prevent recolonization, patients must follow dentist's instructions and make regular visits.

Conclusion

Cases of periodontal abscess accompanied by tooth mobility grade 3 (hopeless teeth) with proper management of periodontal regenerative methods can maintain teeth and prevent the spread of infection. That way, the teeth can last longer so that they do not require tooth extraction.

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