Case Report

Combination therapy in chronic periodontitis: a case report

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Abstract

Background: The aim of periodontal treatment is to provide healthy and functional dentition for the whole life.
Cases Report: A 42 year old female with sever chronic periodontitis, treated medically and surgically, is reported. She initially received antibiotic, Scaling and root planning in addition to oral hygiene instruction. After four weeks, periodontal Surgery, root canal Therapy, extraction of excess tooth and restoration of some teeth were performed, because of remaining residual pockets, and bone loss, flap Surgery and Access flap, with papilla preservation flap method, also modified Widmann flap, were done. After one month, favorable clinical improvement was obtained.
Conclusion: It can be concluded that high oral hygiene level in accompanied with Suitable medical and surgical treatment, enhanced the success of periodontal treatment outcomes even in sever disease.
Keywords: chronic periodontitis, combination therapy, modified widmann flap, papilla preservation flap

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Introduction

Chronic periodontitis is an infection disease occurs as a result of challenge between the host response and specific periodontal pathogens, characterized by the manifestation of a slow irreversible damage of periodontal supporting tissue loss in a period of time[1].

Various treatment modalities have been used for treatment of all forms of periodontitis with various degrees of success. Some studies have found no differences in degree of Success between Surgical and non- surgical treatments[2,3].

Other studies have found benefit in the case of antibiotics to assist the healing of lesions after scaling and root planning (SRP) and or surgery[4,5].

The aim of this report is to present the result of Combination therapy , medical and Surgical , in addition to oral hygiene instruction.

Case Report

A 42 – years – old woman with chief complaint of dental loosening and gingival bleeding during brushing, were diagnosed as sever chronic periodontitis

Her breathing and temporomandibular joint were normal. The oral examination revealed pink gingiva but redness and inflammation in some areas; also, most papillae were blunted and it has bleeding on probing. She did not receive any previous periodontal treatment. Her lower left third molar was extracted previously (Figure 1).

Figure 1. Intraoral photographs of the patient.

Grade II focal involvement of lower right first molar (No. 30) and grade I furcation involvement of upper

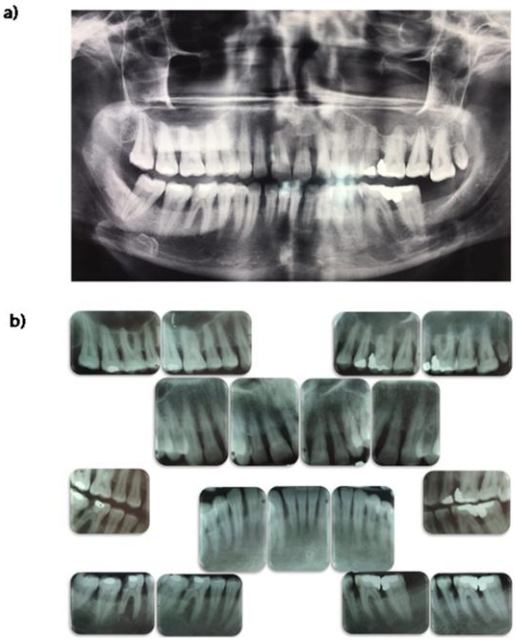

Figure 2. a: patient's OPG ,b: Patient's full mouth radiographs.

right molar teeth (No. 3), upper left first molar (No. 14), and lower left first molar tooth (No. 19) had been developed.

The mobility of teeth 1, 2, 8, 12, 19, 20, 23, and 26 was grade I and the mobility of tooth number 9 was grade II. Plaque Index was more than %80, accompanied by calculus accumulation and stain (Figure 2, 3).

Her overjet was 1mm and overbite was 2mm. Molar and canine relationship was class I.

According to the patient's age and calculus accumulation , in addition to involving of more than 30% of areas and attachment loss more than 5mm , the diagnosis of Generalized sever chronic periodontitis was confirmed . The prognosis of teeth

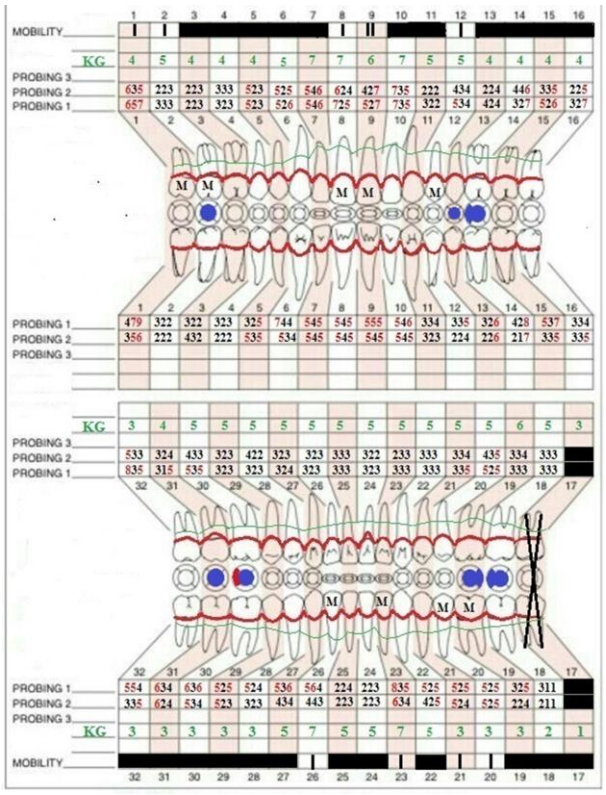

Figure 3. Patient's chart consists of first and second probing depth. Blue parts show fillings and red part showing caries.

7, 8, 9, 15 were poor and were fair for teeth numbers 1 to 6, 10 to 14, and 16 and lower teeth.

For nonsurgical step, oral hygiene Instructions (OHI), Scaling and root planning (SRP), with antibiotic therapy - doxycycline - were recommended[6,7].

The patient was rechecked for Calculus, plaque, occlusion and any new pathologic changes, during maintenance phase. Treatment procedures in surgical phase that should be done for patient were included periodontal surgery, root canal therapy of tooth number 19 and extraction of excessive tooth at the upper left; At restoration phase, treatment of teeth number 18, 19 and 30 was considered. Three weeks after SRP the patient was visited. She had residual

pockets of upper right, so flap surgery was recommended (Figure 4).

Figure 4. Upper right flap surgery procedure.

In addition, residual pockets and bone loss of upper anterior were seen and access flap was designed with "papilla preservation flap"(PPF) (Figure 5).

For upper left, lower right and left sextant, due to persistency of pockets and bone loss, modified Widmann flap was considered. The excessive teeth and teeth number 30-extracted (Figure 6). Stainless steel blade number 15c did all incisions and flaps were sutured by 4-0 silk. At the end of each operation, surgical dressing (Coe-pak, GC America, INC.ALSIP) .After one week surgical dressing and sutures were removed.The intervals considered between operatins was 2 weeks covered the area.

After completion of surgical procedure, the patient was followed for one month. With regard to good oral hygiene and surgical procedures, her periodontal status became stable and even, in some areas, new attachments could be seen; also, teeth loosening considerably were reduced and the patient did not complain of her oral bad odor and bleeding during teeth brushing that she had before (Figure 7).

After the completion of flap surgery the diastemas of upper anterior teeth was closed by composite restoration, notice Figure 8.

Discussion

An Important part of Periodontitis treatment consists of controlling and eliminating the irritant and organisms associated with disease by surgical or nonsurgical[6,7] or combined strategies[7,8]. For this case, it is decided to perform combination treatment Strategy, non-surgical then surgical procedures. The use of a systemic antibiotic as a part of periodontal therapy has been widely documented.it has been demonstrated that patients treated this way present better Clinical results than the ones who did not receive a systemic antibiotic[9]. During the surgical phase, we apply conventional flap, papilla preservation flap and modified Widmann flap to eliminate causative agents.

Figure 5. Upper anterior papilla preservation flap surgery.

Figure 6. Upper right Modified Widmann Flap surgery.

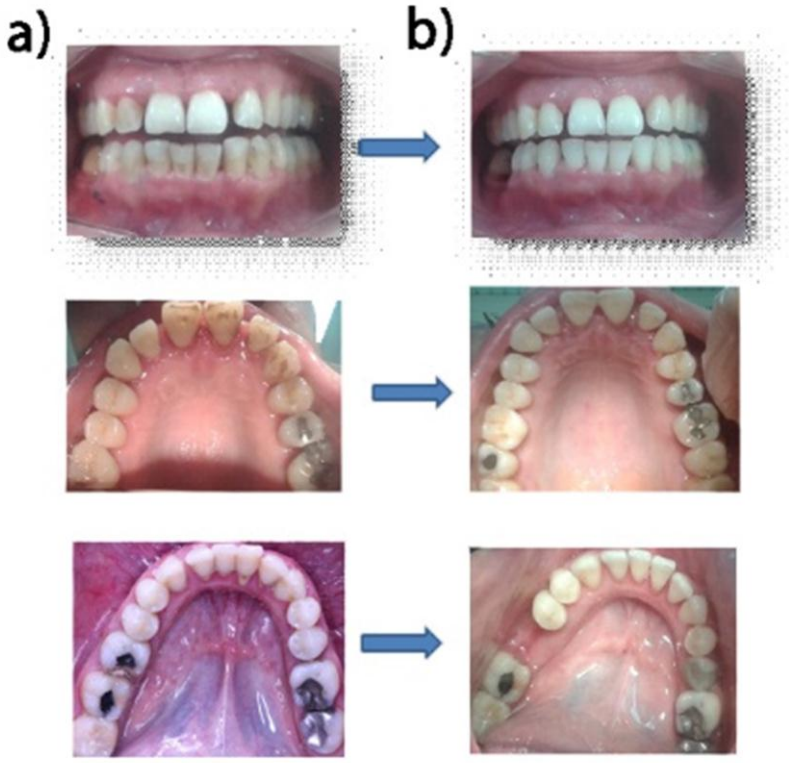

Figure 7. (a) Before and (b) after flap surgery.

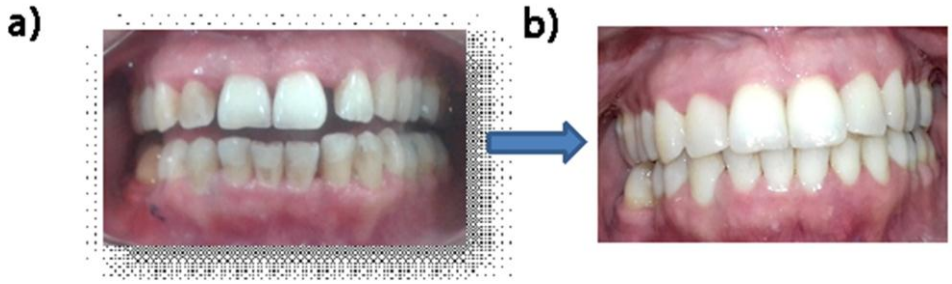

Figure 8. (a) Before surgery (b) After surgery and closing the diastema with composite.

After one-month follow up the results were satisfactory and patient did not complain of bleeding during brushing, oral bad odor and pocket depth reduction, of course patient's oral hygiene improvement affected the healing process. In addition to surgery, high oral hygiene[10] and antibiotic therapy, all of which are necessary for good treatment results and to provide patient with successful periodontal treatments.

Conclusion

Good results on the periodontal treatment of this patient depend on several factors: High oral hygiene by patient, suitable antibiotic therapy and properly designed surgical plans. A comprehensive treatment strategy of a patient with chronic sever periodontitis could save her/his teeth's form, function and appearance, so it leads to improving the patient quality of life.

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