

May 19, 2021

Dear Dr. Lian-Sheng Ma, Science Editor, Baishideng Publishing Group Inc.

I have now completed to revise and am now sending the manuscript entitled “Generalized periodontitis treated with periodontal, orthodontic, and prosthodontic therapy: A long-term case report” (No: 66015). I have revised the manuscript in accordance with the referee’s suggestions. A list of annotations is shown below. I hope the revised version will be well accepted by the editorial committee.

Thank you very much for all the troubles you've taken for me.

Sincerely Yours,

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To reviewer #1 and reviewer #2

Thank you very much for your variable suggestion.

Specific Comments to Authors: *Major Comments*

A) Introduction The introduction seems to be very weak. The focus should be on Ortho Perio interrelationship in aggressive periodontitis. The effects of pathological migration on occlusion harmony should be discussed in brief. The treatment sequence should be included in the need for study with proper reference (Other than case reports).

We added the sentence and reference as below in the Introduction (P4, Line77-84).

Treatment planning in patients with generalized periodontitis are almost same as those in chronic periodontitis patients. The treatment phases are divided into general examination, initial treatment, re-evaluation, surgical treatment and maintenance for both types of

periodontitis. The treatment goal of generalized periodontitis is to generate a health periodontal condition that can retain many teeth as long as possible^[7]. Orthodontic treatment is essential for patients with generalized periodontitis to inhibit progression of periodontitis, because generalized periodontitis causes some pathologic tooth migration such as labial inclination, severe crowding and pathologic extrusion of anterior teeth as well as posterior occlusal collapse.

7. **Teughels W, Dhondt R, Dekeyser C, Quirynen M.** Treatment of aggressive periodontitis. *Periodontol 2000* 2014;**65**:107-133 [PMID: 24738589 DOI: 10.1111/prd.12020]

B) Chief complaint The chief complaint must be in patients own words and not related to dentists observations.

We changed to the patients own words according to your suggestion (P5, Line100-101).

A 35-year and 6-month-old female patient came to our hospital with a chief complaint, “My teeth are wobbly, and I have crooked and protruding teeth”.

C) History of present illness HOPI must be the elaborate discussion about patients chief complaint and other major findings.

We added the sentence as below according to your suggestion (P5, Line104-107)

The patient complained teeth mobility in the upper anterior teeth region from the past 3 years. Although she was treated at a private practice, teeth mobility was not improved. So, the patient was referred to Hiroshima University Hospital by a general dentist for a full mouth periodontal evaluation and treatment.

D) Personal history Personal history includes Oral hygiene habits and presence/absence of habits like smoking and other parafunctional habits.

We added the sentence as below (P5, Line118)

The patient did not have any history of smoking and her oral hygiene was poor.

E) Physical examination Radiographic interpretation is mentioned under physical examination. Clinical attachment levels and mucogingival findings should be mentioned which are of importance in Ortho Perio Cases.

We wrote the observation as below (P6, Line122-130)

A panoramic radiograph and full-mouth set of dental radiographs showed severe

alveolar bone loss; especially, the upper right lateral incisor and left canine were severely damaged without any alveolar bone support (Figures 3 and 4). Posterior occlusal interference on both sides was observed in the anterior and lateral guidance due to unfavorable anterior guidance. Redness and swelling were observed on upper gingiva. Initial periodontal examination showed dental plaque index; 50.9%, mean probing pocket depth; 4.3 mm, 4-6 mm; 40.5%, more than 7 mm; 14.3%, bleeding on probing; 61.9%, periodontal inflamed surface area^[11]; 1725.7 mm², tooth mobility of Miller classification (class 0; 2 teeth, class 1; 18 teeth, class 2; 7 teeth, class 3; 1 tooth) (Figure 5).

F) Diagnosis and Treatment Plan Diagnosis should also include 2017 World workshop classification system as Aggressive Periodontitis is discontinued. Kindly include phase wise treatment plan.

We changed a diagnosis as below according to your suggestion (P6, Line 138-139).

the patient was diagnosed with a generalized Stage III Grade C periodontitis with skeletal Class II maxillary protrusion and severe crowding.

We also changed the name “aggressive periodontitis” to “generalized periodontitis” through the manuscript.

We wrote the treatment plan as below.

1. Initial periodontal treatment (full-mouth scaling and root planing, tooth brushing instruction)
2. Reexamination of periodontal condition
3. Orthodontic treatment
 - i. Extraction of the hopeless upper right lateral incisor and left canine
 - ii. Extraction of the lower right first premolar and left second premolar for orthodontic reasons
 - iii. Insertion of miniscrews into the mid-palatal area with a transpalatal

arch

iv. Lingual movement of the upper incisors and alignment of the lower arch

4. Periodontal surgery

5. Insert dental implant in the upper left canine region

6. Prosthodontic treatment

7. Supportive periodontal therapy

G) Treatment Kindly mention in detail how Non surgical and surgical Periodontal therapy was performed. Kindly mention changes in Periodontal parameters after non surgical periodontal therapy and what was the re-evaluation period taken before starting Ortho treatment. What was the treatment for bone loss in upper and lower right quadrants?

We added the detail of periodontal therapy as below (P8, Line 188-P9, Line 200).

Thus, periodontal flap surgery for the upper left first and second molars was performed. The surgery area was anesthetized by 2% lidocaine. The sulcular incision was made from mesial end of upper left first molar to distal end of upper left second molar. Next, a vertical incision was made and a periosteal flap was raised both on buccal and lingual part. Then, this area was completely debrided by curettes, and debris of calculus on the root surface was removed by scaling and root planning. Guided tissue regeneration for the lower left second molar was then performed. 2% lidocaine was injected to buccal and lingual part of lower molars. The sulcular incision was performed both on the buccal and lingual sides of lower left first and second molars. Full-thickness elevations were made past the mucogingival junction both on the buccal and lingual side. The bony defect area and root surface were completely debrided. A bioresorbable poly lactic-co-glycolic acid membrane (GC MEMBRANE, GC Corp., Tokyo, Japan) was shaped appropriately and set on the bone defect area.

We wrote the changes in periodontal parameters after initial periodontal treatment as below (P7, Line 163-168).

One year after initiating the initial periodontal treatment, the patient showed significant

improvement in the periodontal condition compared to that at the first examination; dental plaque index; 11.6%, mean probing pocket depth; 4.3 mm, 4-6 mm; 13.1%, more than 7 mm; 2.4%, bleeding on probing; 12.5%, periodontal inflamed surface area; 309.3 mm², tooth mobility of Miller classification (class 0; 14 teeth, class 1; 13 teeth, class 2; 1 tooth, class 3; 0) (Figure 7).

We also added the sentence as below (P8, Line 169-170).

Based on this reexamination, we decided to start orthodontic treatment (6 months after the end of initial periodontal treatment).

We did not do any surgical periodontal treatment on the right upper and lower molars.

To Science editor

Thank you very much for your variable suggestion.

1 Scientific quality: The manuscript describes a case report of the generalized aggressive periodontitis treated with periodontal, orthodontic, and prosthodontic therapy. The topic is within the scope of the WJCC. (1) Classification: Grade B and Grade C;

We changed a diagnosis as below according to your suggestion (P6, Line 138-139).
the patient was diagnosed with a generalized Stage IV Grade C periodontitis with skeletal Class II maxillary protrusion and severe crowding.

(2) Summary of the Peer-Review Report: The article has been comprehensively drafted. The effects of pathological migration on occlusion harmony should be discussed in brief. The questions raised by the reviewers should be answered;

We added the sentence in the discussion as below (P12, Line 265-268).

These results suggested that reconstruction of proper anterior guidance by orthodontic treatment is very important to disclude the balancing side, which resulting in the improvement of overall clinical attachment level especially in patients with generalized periodontitis.