

eClinger® Treatment for Prosthodontic Assist

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Abstract

eClinger® is transparent removable orthodontic appliance, non-attachment and weekly changing aligners. It has been applied for prosthodontic assistance, to create a space or consolidate the spacing case and alignment for incorrect angulation teeth, eq:

- (1) arch alignment,
- (2) uprighting teeth,
- (3) Space regaining, and
- (4) functional correction.

Results showed that it has rehabilitated the arch alignment, position of contact point and upright the slanted teeth, as well esthetic improvement.

Introduction

For the purpose of Aligner is to treat malocclusion and rehabilitate esthetic desires for the patient. Aligner approach for prosthodontic treatment is additional category of its indications. For example, crowding and/or spacing at replacement area includes adjacent teeth, missing tooth and angulation control on abutment tooth are the indications of eClinger®, to whom pursues esthetic and comfortable procedure.

Anticipated result(VTO) is accompanied by 3D simulation on software(before treatment) and resin attachment on

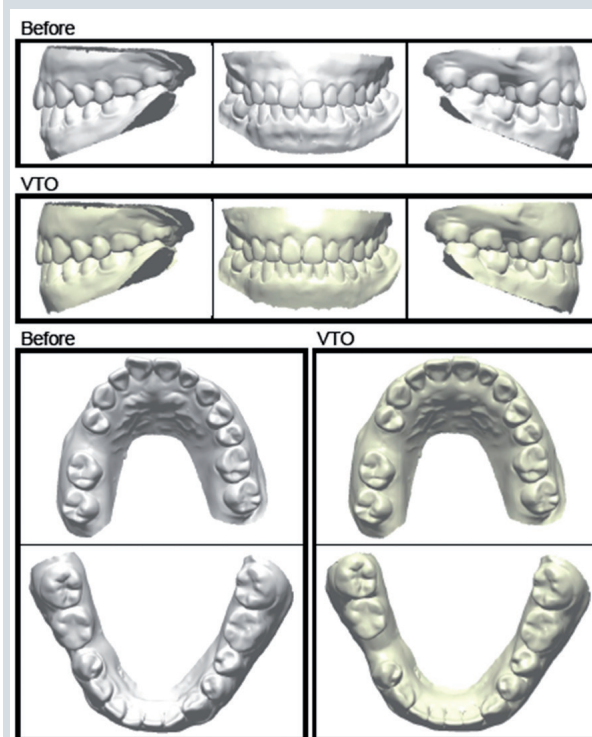
Fig. 1



eClinger® appliance, which recommended to use 17 hours wearing per day.

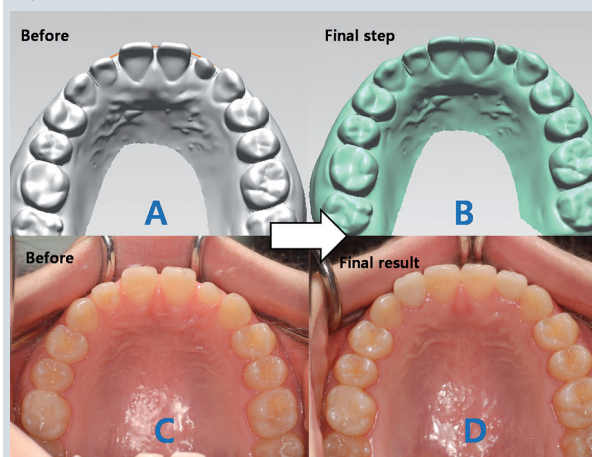
tooth surface is unnecessary for entire eClinger® treatment progress. Weekly changing eClinger® (17 hours/day wear) is going through whole procedure painlessly. (Fig. 1-3)

Fig. 2



eClinger® treatment plan, shows anticipated result(VTO) compared to before. 2nd bicuspid area in right lower side recovered its original space, replace by implant after eClinger® treatment.

Fig. 3



20/F, young female showed smaller sized upper both left and right lateral incisors and spacing on central incisor area. eClinger® planned to replace veneer crown on them with additional space over 2 lateral incisors(A,B) after space consolidation treatment. Prosthodontic replacements were performed after aligner treatment(C(before),D(after)) on lateral incisors.

Aligner assisted prosthodontic process

1. Decrowding and space closure in dental arch, alignment partially or entirely.
2. Uprighting or angulation recovery on abutments or adjacent teeth.
3. Space regaining on missing tooth area for implant replacement.
4. Functional occlusion recovery to correct malaligned teeth for further prosthodontic replacement.
5. Indirect method for temporary crown/veneer by Aligner.

eCIGNER® Application

(1) Space consolidation for prosthodontic recovery

Patient: 26/F

CC: Spacing in lower arch

Tx. Plan: Space consolidation and refer to prosthodontist (who established entire treatment objective).

(Fig. 4-6)

Fig. 4



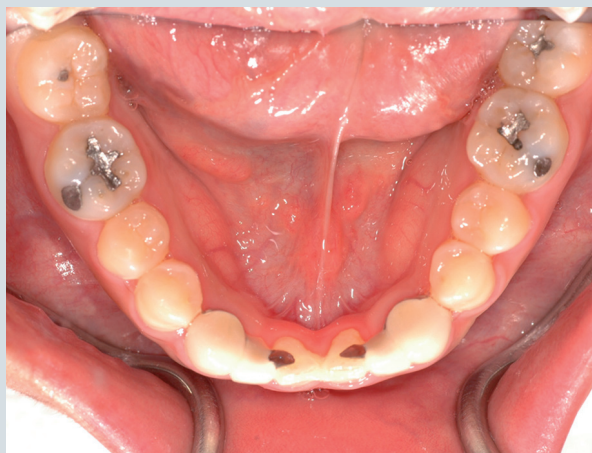
Young female showed space in lower arch due to missing 2 lateral incisors.

Fig. 5



In progress, showing space consolidation procedure by eCIGNER®

Fig. 6



Upon prosthodontic treatment plan, eCIGNER® performed to consolidate space for final restoration.

(2) Veneer crown restoration after eClinger® treatment

patient: 34/M

CC: Anterior cross-bite

Tx. Plan: Alignment and refer to prosthodontist due to abnormal shape of incisors.

(Fig. 7-9)

Fig. 7



34/M, showed anterior severe cross-bite status

Fig. 8



After jumping out by eClinger®, upper incisors showing irregular shapes.

Fig. 9



After eClinger® treatment, prosthetic replacement were performed to recover the original shape and function.

(3) Space regaining procedure for missing tooth

A. Case 1

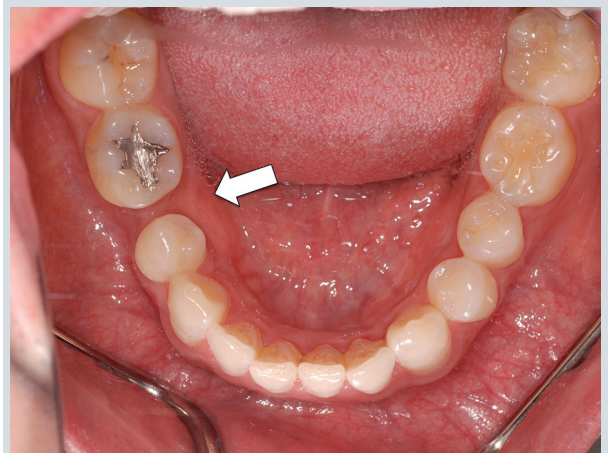
Patient: 28/M

CC: Alignment aid for prosthetic replacement by prosthodontist

Tx. Plan:

(Fig. 10-14)

Fig. 10



2nd bicuspid missing on left and space has been disappeared. Prosthodontist planned to recover the function by implant. eClinger® planned to regain a space for implant.

Fig. 11



On progress

Fig. 12



Bicuspid space was regained by eCIGNER®.

Fig. 13



Prosthetic implant was inserted, and then, eCIGNER® retainer maintain the gained space till final restoration completed.

Fig. 14



Final restoration on 2nd bicuspid was completed.

B. Case 2

Patient: 33/M

CC: Referred from prosthodontist

Tx. Plan: Space regaining

(Fig.15)

C. Case 3

Patient: 30/M

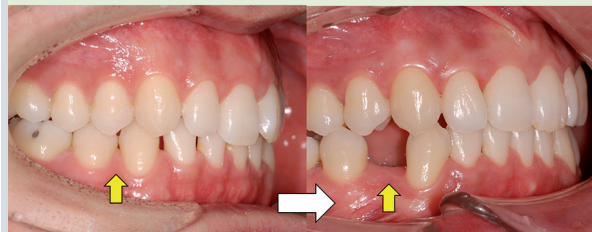
CC: Referred from prosthodontist

Tx. Plan: Space regaining for implants

(Fig.16)

Fig. 15

8 months: 10 steps eCIGNER® Treatment

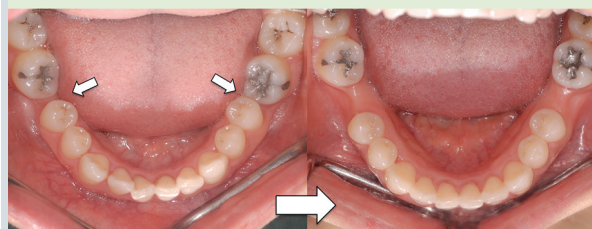


Male patient case, showed missing 1st premolar area(left) was rehabilitated after eCIGNER® combined treatment(right).

Fig. 16

eCIGNER®: Prosthodontic Purpose
for implant space on missing 1st molars

Space Regaining by
Bilateral Expansion & Distalizations



Bilateral molars missing case. left(before) and after eCIGNER® regaining procedure(right).

(4) Minor tooth movement for prosthodontic replacement

Patient: 29/F

CC: Referred from prosthodontist

Tx. Plan: Alignment

(Fig. 17-18)

(5) Functional recovery procedure by eClinger®

Patient: 29/M

CC: Abnormal function on right premolar

Tx. Plan: correction of scissor bite

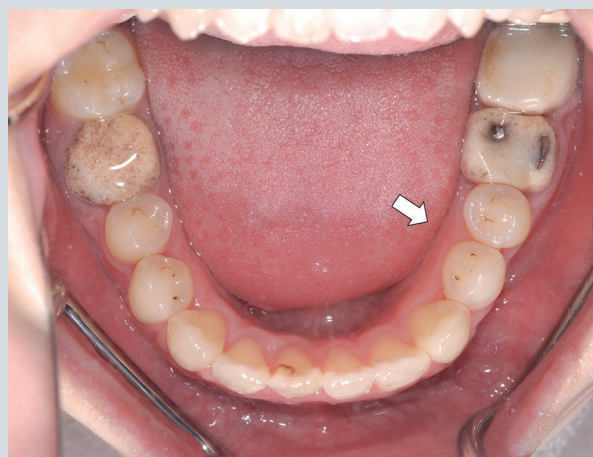
(Fig. 19-25)

Fig. 17



Female case referred from prosthodontist who requested to improve the contact point on premolar area and crowing on anterior region both. 4 molars showed temporary resin crowns.

Fig. 18



After eClinger® treatment, alignment has been successfully completed and ready to continue prosthodontic replacement.

Fig. 19



Male patient, complaints of malfunction on right premolar area due to scissor bite on 2nd premolars

Fig. 20



eClinger® started to correct with temporary jacket crown replacement on right 1st molar. See the space between 1st molar and 2nd premolar, intended to move the teeth immediately.

Fig. 21



On progress by eClinger®.

Fig. 22



Correction of 2nd premolar was completed.

Fig. 23



After reposition of 2nd premolar, final restoration was performed on right 1st molar.

Fig. 24



Before treatment, scissor bite is shown on right.

Fig. 25



After treatment, scissor bite has been improved by eClinger® combined with prosthodontic replacement.

Conclusion

Reviewing eClinger® application in prosthodontic purposed cases, it has been showed that minor tooth movement has been successfully achieved to move abutment to ideal position with normal angulation.

Alignment and space consolidation process for prosthodontic purposed patient has been ideally executed throughout the progress. Space regaining procedure has been applied to reach the optimal room for implant as final objective. Non-attachment aligner shows a benefit to avoid unnecessary additional procedure through.

eClinger® reacts as temporary retainer until final prosthesis replaced, and indirect tray to fabricate temporary crown in the middle of procedures.

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