

Invisalign Go Case Report

Sustainable Smile using the Invisalign Go System with Non-Invasive Treatment Approach

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invisalign® go

The female patient was 30 years old at the time of first presentation. She had a dental history of treatment with fixed appliances as a teenager; however, the treatment relapsed as a result of failure to comply with retention. The patient's main concerns included crowding of her lower anterior teeth, rotation of her upper anterior teeth, the distinct discolouration on tooth 12 and the chipped incisal edge of tooth 21. She was reluctant to use conventional orthodontic devices to address her current concerns, due to a history of using fixed appliances. Furthermore, she was apprehensive of any dental treatment requiring multiple tooth preparations for veneers and crowns. The patient also declined any inter-proximal reduction (IPR).

FACTFILE



Catherine Yang graduated with a Bachelor of Dental Surgery from the Dental School at the University of Sydney in 1999. Dr Yang is a happy dentist, practising in Sydney, Australia since 1999. Her passion for helping people to overcome their fear and enjoy life has made her an expert in health and well-being. Dr Yang's topic, 'S.T.E.P. on Fear' has been presented at the 38th Australian Dental Congress and at the Dental Global Conference in Bali. Dr Yang is also a co-author of the Amazon Australia Best Selling book, *LEGACY: The Sustainable Development Goals in Action*. Dr Yang is proud to be an accredited provider of Invisalign Go.

CLINICAL FINDINGS

- 3 mm Class II canine malocclusion on the left side and near Class I canine relationship on the right side.
- Moderately rotated incisors with 4 mm anterior overjet.
- Moderate crowding of anterior teeth in both maxillary and mandibular arches.
- Dental midline discrepancy with upper and lower midlines deviated to the patient's right.
- Hypoplastic tooth 12 with distinct orange to brown appearance.
- Hypoplastic cervical third labial surface of tooth 21.
- Chipped incisal edge of tooth 21.
- Chronological pattern of mild hypomineralisation of tooth enamel across the dentition.
- Abrasion lesions affecting premolars and molars, evidence of gingival recession and root exposure.

TREATMENT GOALS

- Create an ideal overjet.
- Upright the incisors in relation to their long axis.
- Improve anterior teeth alignment for both maxillary and mandibular arches.
- Correct dental midline deviation.
- Decrease dyschromia of tooth 12.



Figure 1: Intra- and extra-oral images before treatment



Figure 2: Panoramic radiograph before treatment



Figure 3: Initial ClinCheck treatment plan

- Restore the chipped incisal edge of tooth 21.
- Alleviate localised heavy contacts due to malocclusion and reduce the risk of further incisal chipping.
- Give clear instructions and ongoing support for long-term dental care in best interest of the patient.

TREATMENT PLAN

Treatment aimed to address the moderate crowding of anterior teeth in both arches and to correct the anterior overjet. Following an initial consultation process which discussed the possibility of re-aligning teeth in the least invasive and most timely manner, the patient was recommended the Invisalign Go System.

Prior to commencement of treatment, a ClinCheck treatment plan was developed that involved no IPR and no attachments, as per the patient's request. Informed consent of the patient was obtained regarding the expected larger interdental embrasure spaces without any IPR as a result of the pre-existing tooth forms and sizes. Although the patient declined IPR, she accepted mild enameloplasty at the finishing stage in her treatment plan to decrease the dyschromia on tooth 12 and restoration of the chipped incisal edge of tooth 21.

TREATMENT DETAILS

Invisalign Go aligners were used as a time and cost-effective option to improve the anterior alignment and complete the treatment in an expected time frame of 3–6 months. 14 sets of upper and lower aligners were used during the treatment. The first set of aligners were worn for 2 weeks, and a weekly aligner change

protocol was applied for the subsequent sets. Throughout her treatment, the patient was fully committed to wearing her aligners as instructed for a minimum of 20 to 22 hours a day.

After receiving the initial ClinCheck plan set up, one modification was requested in order to accommodate for mild enameloplasty on teeth 12 and 21. The labio-incisal hypoplastic surface of tooth 12 was thinned and polished to decrease dyschromia. The incisal edge of tooth 21 was also trimmed and polished to improve the appearance of the chipped edge. Following the enameloplasty, topical fluoride treatment was applied as a preventive measure.

ACTIVE TREATMENT TIME

3 months.

ATTACHMENTS

No attachments.

RETENTION

Additional fixed retention was provided at the request of the patient. Retainer wires were bonded palatally to teeth 13, 12, 11, 21, 22, 23 and lingually to teeth 33, 32, 31, 41, 42, 43. Upper and lower Vivera retainers are currently worn nightly to maintain the dental positions that were achieved.

CLINICAL TIPS

- The key to the success of this treatment plan was the careful selection of the case. Patients presenting with mild to moderate dental malocclusion are most amenable to treatment with the Invisalign Go System.

- With the right case selection, treatment time can be very short and with focusing on the anterior dentition, overall discomfort for the patient can be reduced.
- Patient compliance can be enhanced by focusing on the chief concerns of the patient. In this case, the patient's motivation was to achieve a sustainable new smile with better alignment using the least invasive approach.
- When the clinician and the dental team can look through the lens of the patient, the value proposition can be expressed more effectively, and the patient's concerns can be addressed more efficiently.
- Prior to commencing Invisalign Go clear aligner treatment, the patient's full understanding and documented, informed consent are required to avoid misunderstanding and any unrealistic expectations.
- Routine dental check-up and long-term care are important for the maintenance of the final occlusion.

TREATMENT OUTCOME

An outstanding treatment outcome was achieved in 3 months by Invisalign Go treatment without IPR or any attachments. A functional and aesthetic dental occlusion was accomplished. Both the upper and lower dental midlines were centred and coincident with the facial midline. All incisors were uprighted in relation to the long axis, and their angulation was corrected. Furthermore, a pleasing occlusal (inter-arch) relationship with good interdigitation between the upper and the lower dentition was established. In addition, the application of bonded retainer wires, together with the patient's commitment to wearing Vivera retainers, will provide additional stability to the dental arches. The patient was very grateful for her sustainable new smile. She enjoyed the entire process of the Invisalign Go treatment.

IMPACT ON CLINICAL PRACTICE

Invisalign Go System can be adopted as a stand-alone treatment or as a pre-alignment strategy prior to further restorative or cosmetic applications. For patients, the Invisalign Go System offers a rapid and effective orthodontic treatment option to correct mild to moderate misalignment with an almost invisible treatment modality and minimal disruption to their lifestyle.

For the restorative dentist, the Invisalign Go System is a powerful tool that offers almost complete control of the outcomes



Figure 4: Intra- and extra-oral images after treatment

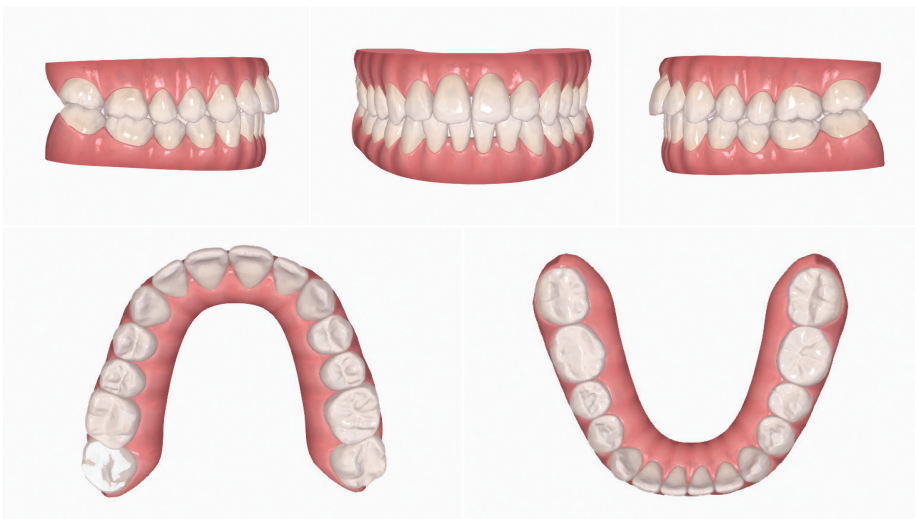


Figure 5: Final ClinCheck treatment plan

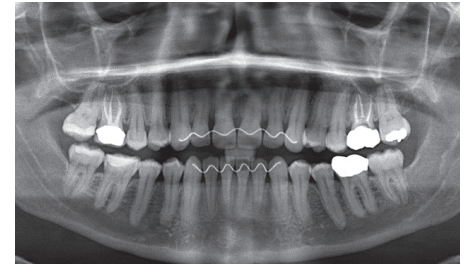


Figure 6: Panoramic radiograph after treatment

by enabling the visualisation of the restorative process. In addition, the advanced technology of the Invisalign Go System allows the patients to be active stakeholders in their treatment journey. From the development of the ClinCheck treatment plan to allowing the patient to handle the Invisalign Go typodont aligners, patients commonly express enthusiasm, motivation and commitment with the necessary compliance to achieve their treatment outcomes. In essence, the Invisalign Go System fosters a closer relationship between the patient and dentist, resulting in the delivery of extraordinary outcomes.

CONCLUSION

The patient presented with Class II canine malocclusion on the left side, an increased anterior overjet and moderate crowding of anterior teeth in both arches. The patient's chief concerns were addressed with the Invisalign Go treatment and mild enameloplasty applied to tooth 12 and tooth 21. This case illustrated that Invisalign Go System was very effective in improving teeth alignment, achieving an aesthetic outcome with good occlusion within a short treatment period, without IPR or attachments. The patient was very happy to achieve a functional and sustainable smile.

Author disclosure

Dr Catherine Yang was provided an honorarium from Align Technology, Inc. for her contribution towards the development of this case report.

"Invisalign Go System can be adopted as a stand-alone treatment or as a pre-alignment strategy prior to further restorative or cosmetic applications." **Dr Yang**

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