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How to perform a complex oral rehabilitation in stages according to the convenient financial flow for the patients, providing, in the first stage: health, function and aesthetics

INTRODUCTION

For each patient we treat, it is necessary to analyze individually the current moment of their lives, their main complaints and what investment they can make at that moment. Many times, there should be means for the patient to be treated in a segmented way.

In this type of situation, we often have to carry out a planning in stages, provided that, at a first step of the rehabilitation planning, we manage to remove the occlusal discomfort, improving the basic symptoms of oral and systemic health, such as chewing and swallowing, breathing, complementing with esthetics, that gives back the desire to smile. All this organized with occlusion, physiology, periodontal health and esthetics in a satisfactory way. We can then plan the rehabilitation with 28 ceramic laminates performed by sector, according to the patient's time availability and financial convenience.

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HISTORY

A 55-year-old patient who, after five years of deep depression caused by the loss of a very close relative, sought care with a very poor oral health. There was loss of some dental elements, in addition to joint pain, loss of vertical dimension of occlusion (VDO), much discomfort in mastication, several fractured and infiltrated amalgam restorations, and dissatisfaction with her esthetics when smiling. During that difficult time, she decided on dental treatment.Normally, for a total rehabilitation treatment, we always carry out a 3D digital scan and study models with diagnostic wax-up. In addition, we determine the necessary surgeries (extractions, implants and cosmetic surgery), which even more crucial for a job that will involve 28 ceramic elements.In addition to the functional reasons of occlusion and physiology - such as chewing, swallowing and breathing -, esthetic reasons are also within the indication of an increase in VDO, in order to create anterior spaces for proper development of the anatomy in the anterior region.There are several techniques to assist in determining the most appropriate VDO for each patient. The association of techniques and experience in the area, maintaining bilateral posterior occlusal stability with simultaneous contacts with the same intensity and the condyles in centric relation and well-defined anterior guides, allows the determination of the VDO closest to the ideal. The feeling of comfort after this determination may be a good indication, but, depending on the case, it is not a single, ideal determinant. It is important that the dentist always understands and comprehends the occlusion, in order to always try to solve the esthetic and functional rehabilitations in a more conservative way.

In the mid 80's, I had the great opportunity to learn, for three years, with the great professor Waldir Antônio Jason, in his practice in Bauru (SP), his practical and very clinical method of analyzing and establishing adequate occlusion in several situations. A great man and teacher who left an important legacy with his teachings.

PLANNING

First step

With the wax-up ready, we first performed the surgeries for extraction of the lost roots and three immediate Straumann implants, by the 3D guided technique (digital planning performed by Dr. Vinicius Machado), a technique that we have used for 5 years with great results. We also performed anterior esthetic gingival surgery.

Second step

Using an orientation jig made from the wax-up, we removed the old amalgam restorations and the decayed tissues of all the posterior teeth, we performed the direct composite resin restorations and reconstructions on each dental element individually, already lifting the VDO bilaterally in association with the pressed provisional on the implants.

After obtaining the models in plaster, or by means of digital scanning, we mounted them in centric relation (CR) with an occlusal registration, using a jig deprogrammer, facial bow (when necessary) and correct bite registration.

Some techniques that we use to increase VDO in the mouth:

"In this specific case, in which the patient had many old resin and porcelain crowns and a very great loss of VDO, after all occlusal analysis and wax-up, we constructed a reference jig for increasing VD in position on the two upper centrals, worked the individual adhesion in each tooth, resin and porcelain, for the direct reconstruction in resin with matrices between

the teeth, preserving the proximal contacts and the correct hygiene; we did not polymerize the last layer and asked the patient to occlude with the jig in position, defining the new occlusion with the necessary increases; finally, we cured it. We worked by hemiarches on both sides in an extensive clinical consultation. Small adjustments are always needed. With the posterior occlusal stability defined, anterior spaces are created for esthetic and functional construction, as reported in this case. We have used this technique extensively in patients with a history of TMD.

» Another great technique is Table Tops, very suitable for young patients with bruxism and severe acid erosion in natural teeth. They are small resin or porcelain prosthetic restorations made in the laboratory or in the CAD / CAM system (Cerec), in which we adhere only the occlusal tables in a very conservative way, increasing the VDO and creating the necessary spaces in the anterior region.

» Complex rehabilitation cases in which we have to remove crowns, large metal restorations, etc. After all the initial planning, we removed everything by hemiarch and installed laboratory or CAD/CAM acrylic provisionals, mounted in articulator and cement temporarily. We use this technique when we set out for the definitive sequence soon after.

Third stage

With the posterior occlusion stabilized and the patient reporting comfort, we treated the anterior segment with direct composite resin, defining the esthetics and the correct anterior guides.

With two steps ready, posterior individual restorations in direct resin (Filtek Z350, 3M) with free interdental spaces for correct hygiene, comfortable chewing, harmonious anterior esthetics and well positioned dynamic guides, we can give the patient the necessary time to transition to the 28 laminates, if necessary, according to their financial flow.

The anterior esthetics was performed with Empress Direct Trans 20 on the palatine of elements #13 to #23, and finalized with Estelite Omega BL2 and B1 in the buccal. We performed a 3D digital scan of the anterior esthetics, which we made in direct resin (Estelite Omega , Tokuyama), and stored in our database, to be our guide for future ceramic laminates.

We can, over time, work on the posterior segment with the full- veneer type crowns in ceramics, by hemiarch, according to the possibilities of the patient, without any problem. This would be our First Step of rehabilitation, returning oral health, always helping in all the physiological part of the patient and providing an esthetic that made the patient very happy at a very reasonable cost, giving her the freedom to choose the right moment to continue the treatment.

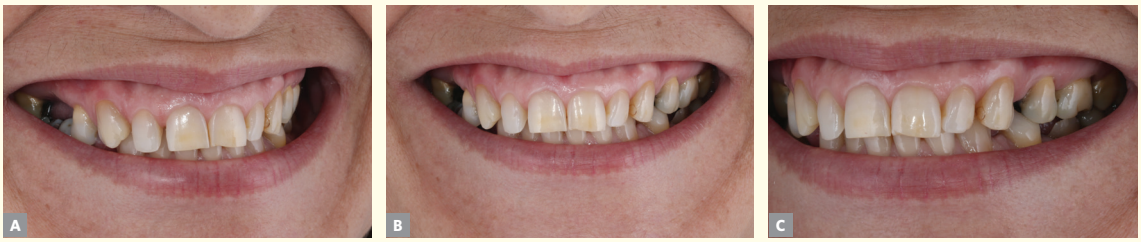

Figure 1: Photographs of the smile in: **A)** right lateral view; **B)** frontal view; **C)** left lateral view.

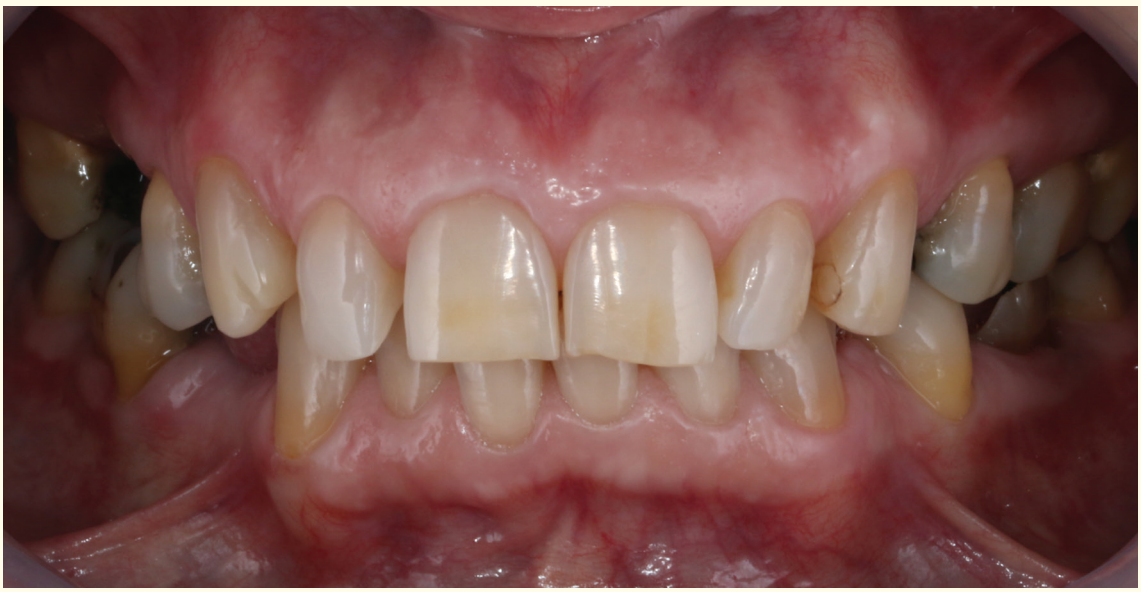

Figure 2: Frontal intraoral photograph in maximum intercuspation, showing the need for increased VDO.

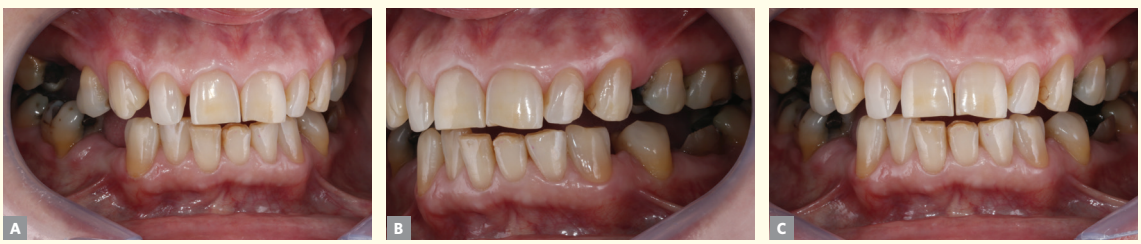

Figure 3: Intraoral photographs in disocclusion **A)** Right lateral view, **B)** frontal view, **C)** left side view.

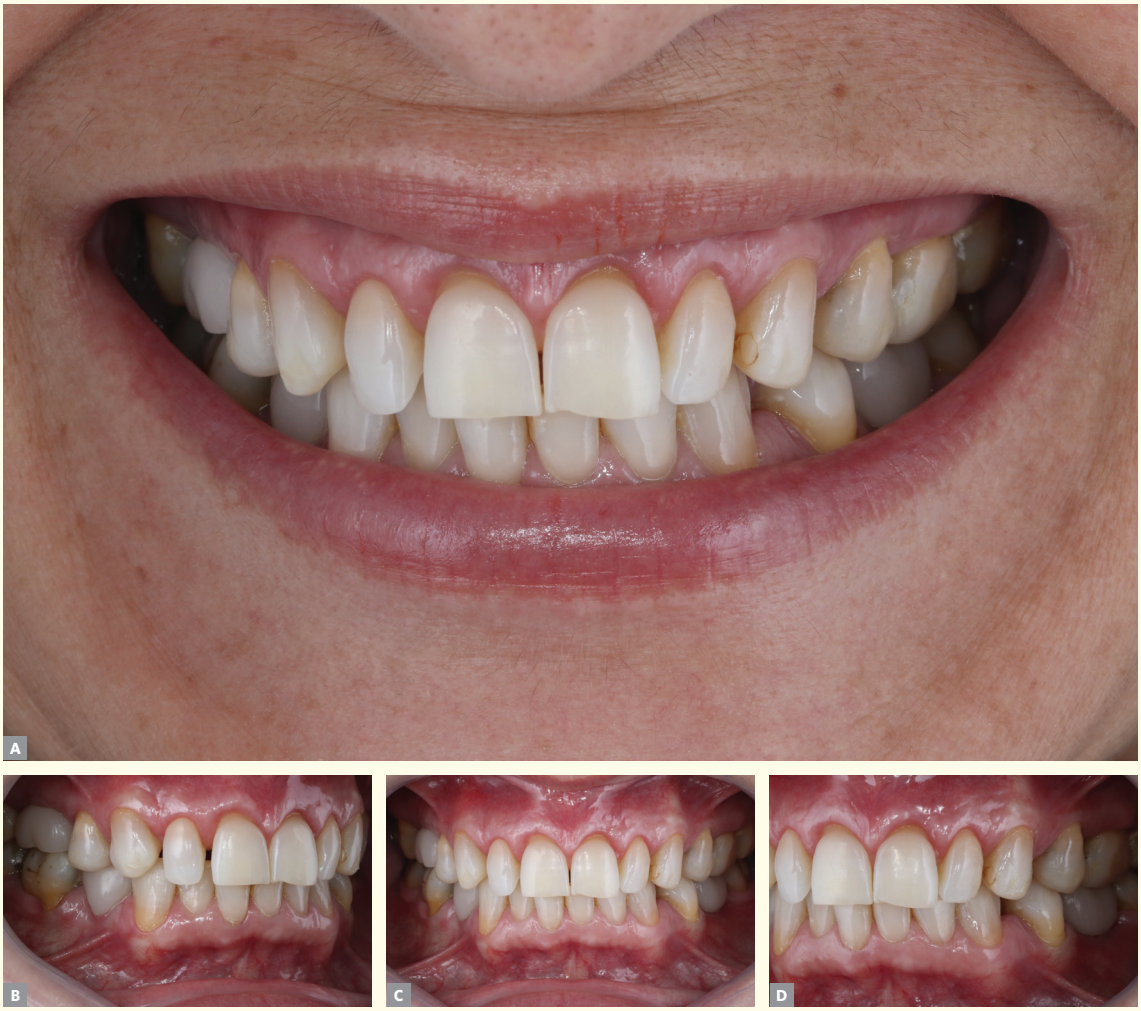

Figure 4: A) Smile after increasing VDO, implant placement with immediate provisional, gingival cosmetic surgery and tooth whitening. **B–D)** Intraoral photographs after gingival cosmetic surgery and tooth whitening.

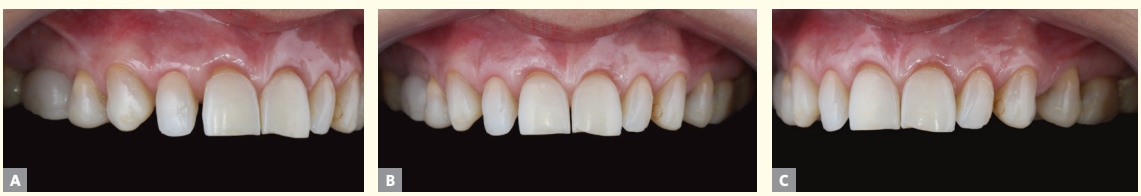

Figure 5: Photographs with black background, after esthetic gingival surgery and dental whitening: **A)** right lateral view, **B)** frontal view and **C)** left lateral view.

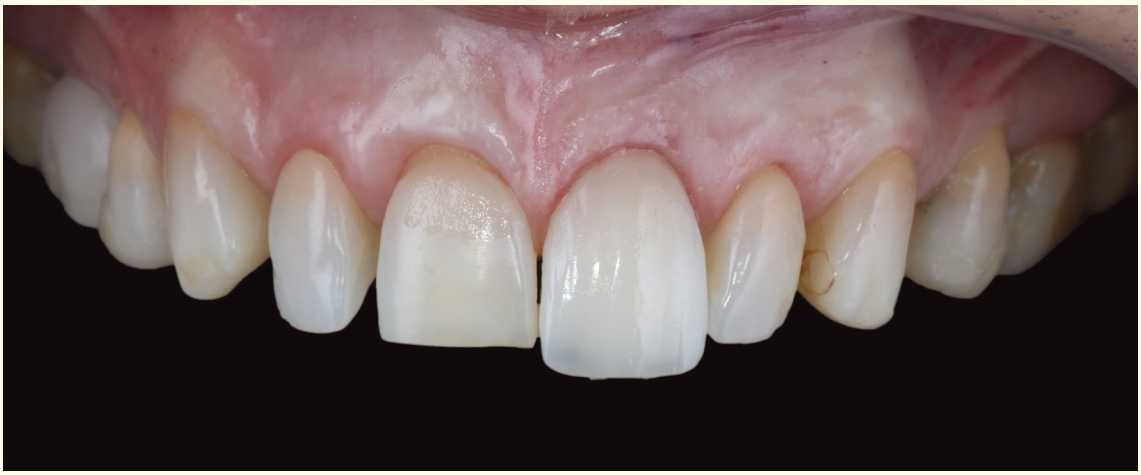

Figure 6: Photograph with black background after the preparation of tooth #21 guide after already stabilizing the increase of VDO.

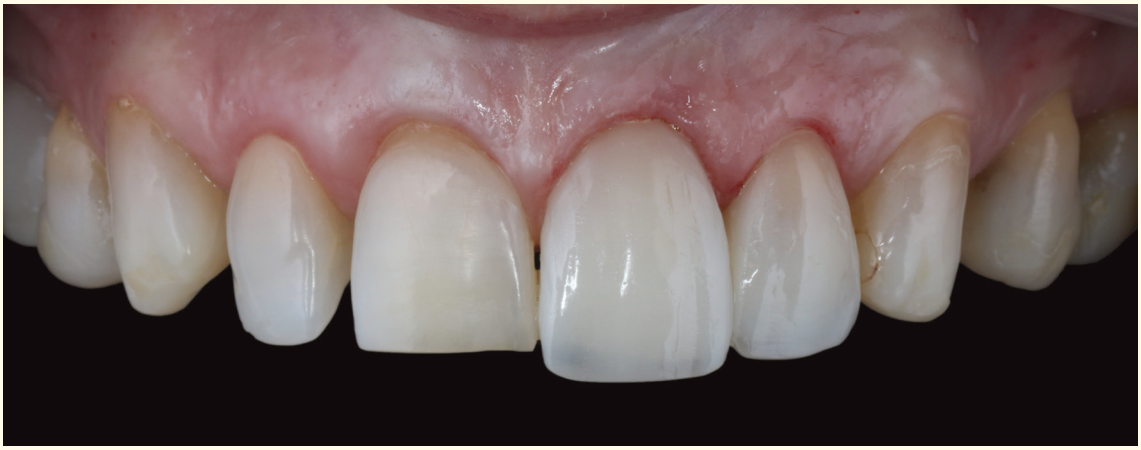

Figure 7: Photograph with black background after the making of elements #21 and #22.

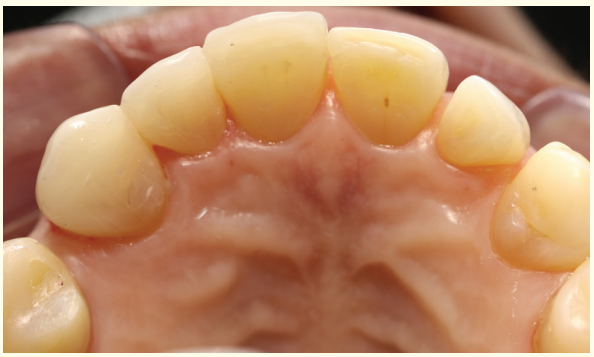

Figure 8: Palatal view after three finalized elements (#21, #22 and #23). Note the addition in the palatine, made of composite resin.

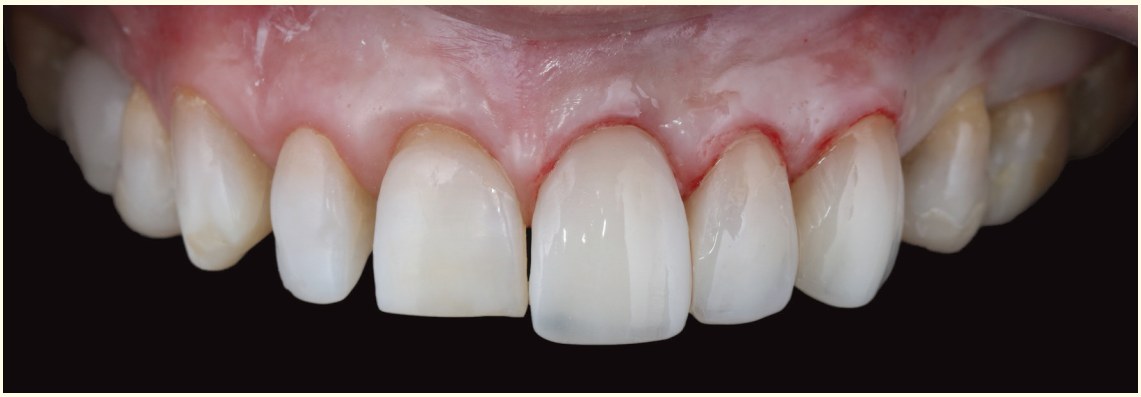

Figure 9: Photograph in frontal view with black background after making the elements #21, #22 and #23.

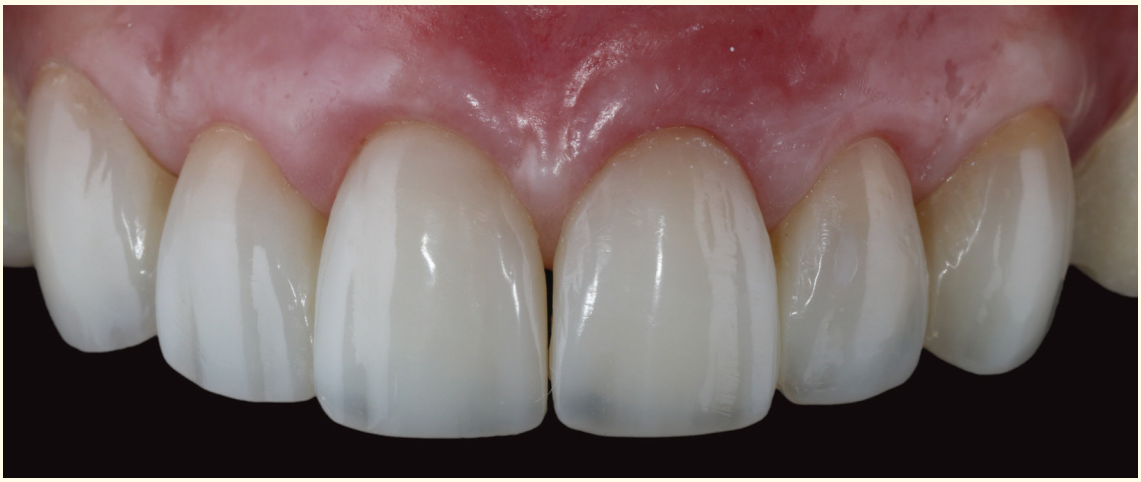

Figure 10: Approximate view with black background at the end of the composite resin work on elements #13 to #23, restoring the guides of the anterior occlusal dynamics.

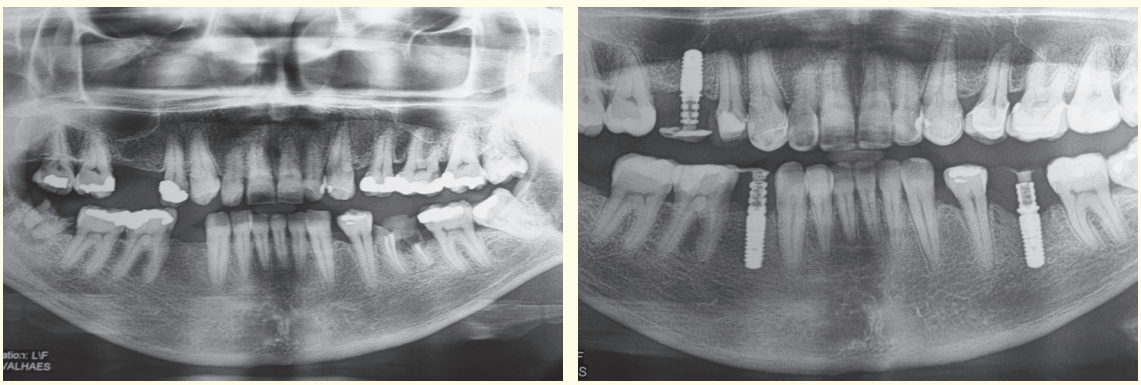

Figure 11: Panoramic radiograph at the beginning of the treatment and after the completion of the first step of the work.

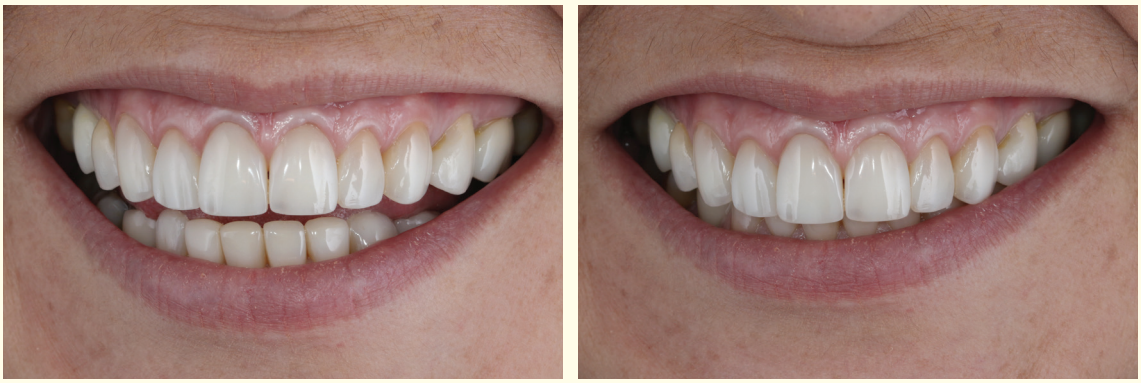

Figure 12: Smile showing the addition also in the lower teeth.

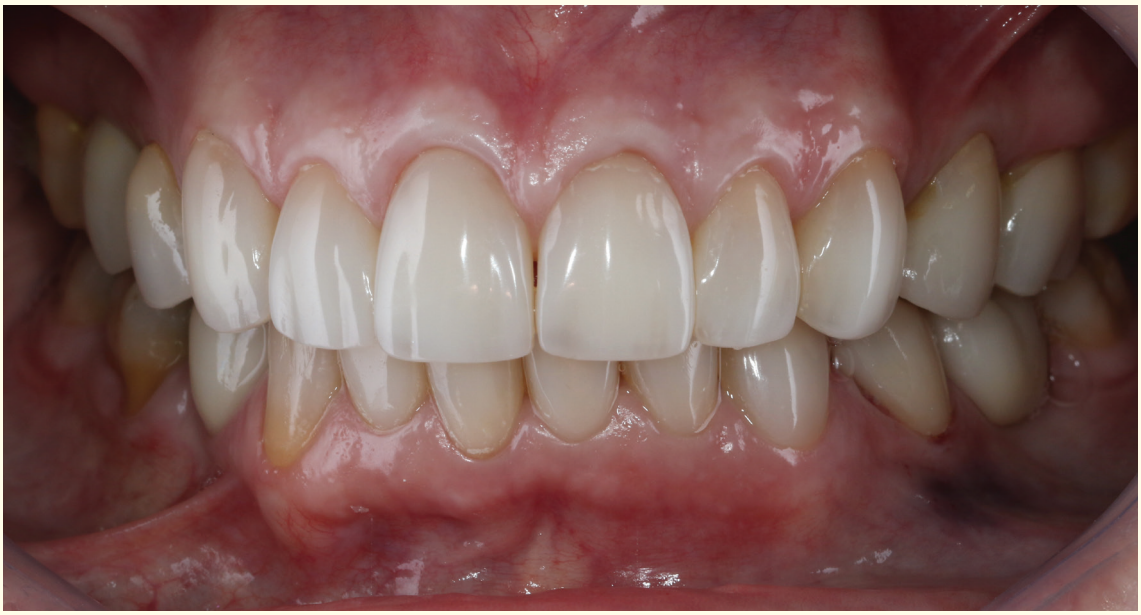

Figure 13: Intraoral photography after treatment. We started with care and gradually replaced the posterior resins by ceramics according to the patient's financial flow (teeth #14, #16, #24, #26, #35, #36 and #44).

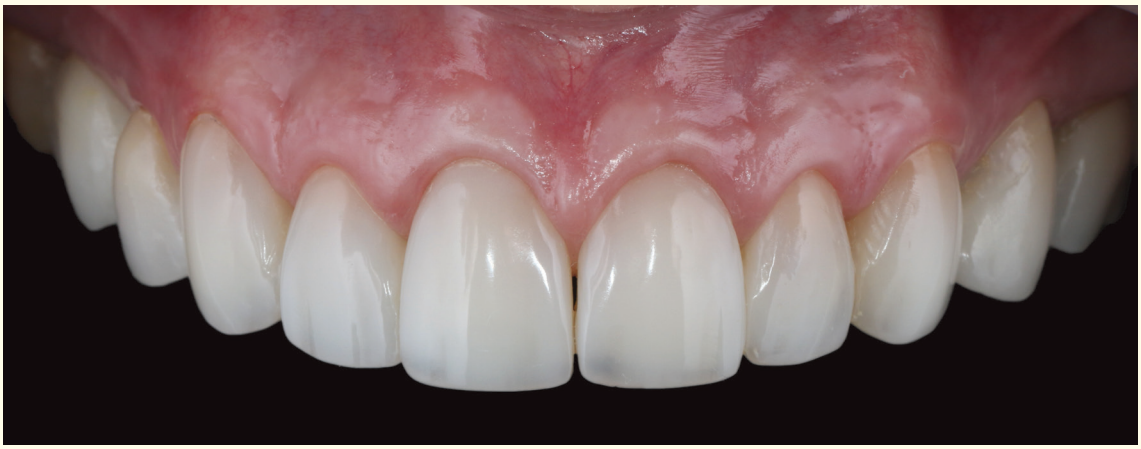

Figure 14: Intraoral photography with black background of the complete restorative work (after 1 year and 2 months of follow – up). It is noted that composite resin restorations were made on teeth #13 to #23, and e.max crowns on #14, #15, #24 and #25. In this phase, the resin restorations were replaced in the posterior teeth (for VDO increase) by porcelains.

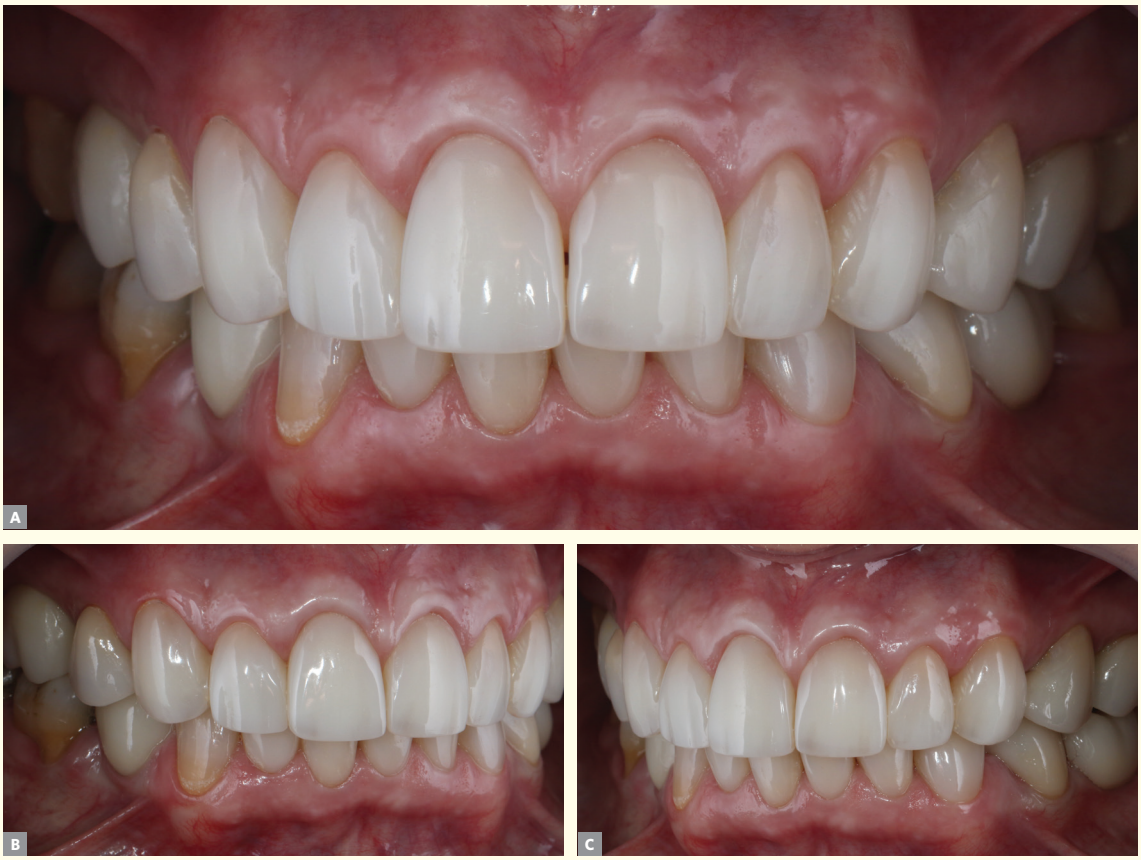

Figure 15: Intraoral photographs after 1 year and 2 months of completion of the work.

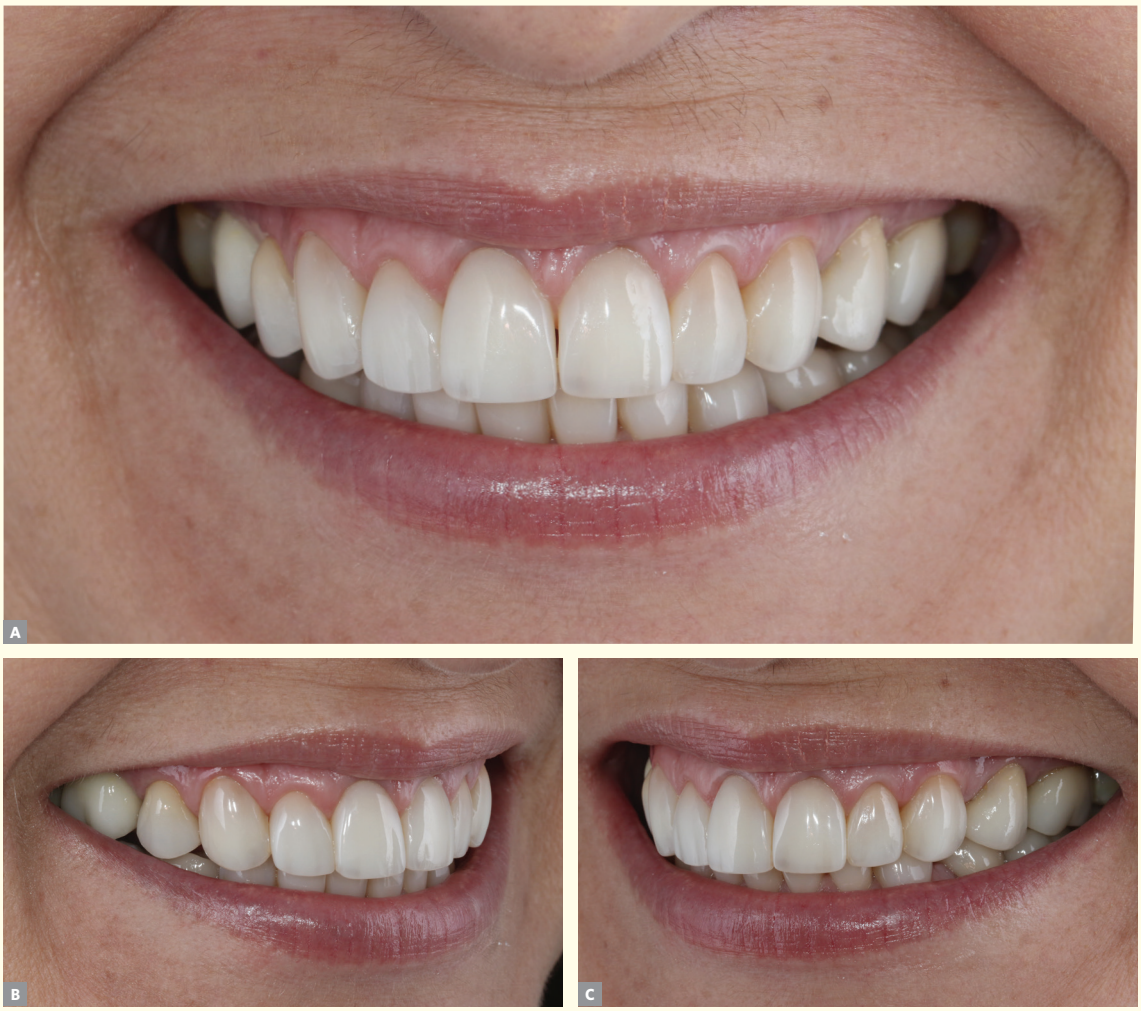

Figure 16: Photographs of smile after 1 year and 2 months of completion of work.

CONCLUSION

The importance of understanding the profile of each patient and their momentary needs is of extreme relevance in order to reach a satisfactory result both for the clinician and, mainly, for the patient. I believe that Operative Dentistry, Prosthetics, Periodontics and other specialties should merge into one, so as to bring well-being and health, to give patients a new perspective on life with a new smile. Common sense, in this specific case, and the way it was conducted, returning the masticatory function to the patient and a joint comfort with the least possible wear, should exist in the clinical routine of every dentist.