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## Direct composite resin x ceramic laminates: the choice

The aim of this column is to promote reflection and lead the reader to some important considerations on the choice of restorative materials in cases of esthetic restorations - actually, considering clinical criteria for the choice between ceramics and composite resins.

In current odontology, I believe that, nowadays, it is very important for the dentist to master and switch over between both techniques: the direct and the indirect one. Mastering both techniques makes it easier to decide which one is the best, according to the functional needs and the desire of each patient.

By listening, discussing and explaining the variables, we will be always choosing the best option for each patient, instead of applying only the technique mastered by the dentist or the one which results in greater financial 'advantage'.

The great popularization of 'porcelain lenses' has made Odontology democratic and has impelled a larger number of professionals to dedicate to the aesthetics field. By using that technique, the dentist shares the art of this job with a dental technician and, by working together, they may reach extraordinary results.

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As for the composite resin, it is a material that requires from the professional great longitudinal learning, ability, training, knowledge, and mastering both the material and the principles of occlusion. All this is necessary in order to reach great performance, regarding both aesthetic and durability. Furthermore, the 'art' and the responsibility of the case are only in the hands of the clinician.

By mastering the composite resin direct technique, besides solving cases, the dentist will have the possibility of improving their view, which allows them to modify, improve or even alter the whole simulation of the case in which ceramic is needed. The 'performance' and control in the manufacturing and adjustment of the mock-up and of the immediate provisionals made with bis-acrylic resin are essential for the success of the later 'lenses' manufacturing.

From the closing done by the laboratory, the clinician who has knowledge of the direct technique can, by means of adjustment or additions in composite resin to the mock-up or the provisional, customize the result desired by the patient right in their mouth. And from that customization, a new dental impression is done and a new reference model for the ceramist is created, already approved by the patient. Thus, the indirect work becomes easier for the laboratory, and also more predictable, for both the clinician and the patient.

For that reason, I've always insisted on valuing this manual work, in which, most of the times, the number of clinical hours for esthetic reconstruction in composite resin correctly performed is the same or is larger than in indirect work. At my clinic, the fees for these two techniques are very close, although I do acknowledge the greater durability of ceramics. This is our protocol and we have been doing our job that way for over 30 years, based on concepts and techniques taught by my father.

At our clinic, we have used metal-free ceramic restorations (laminates, 'lenses', crowns of full veneer type) in many previous cases and also in many extensive and complex rehabilitation cases.

In some clinical situations, I believe it is preferable to make use of composite resin. The cases indicated for the direct technique in composite resin are the following:

» Very young patients, after finishing the Orthodontic treatment, for functional and esthetic finishing. It normally involves only additions, without the need of any preparation. Frequently, also on posterior teeth, for occlusal complements. I believe there hasn't been any definite work on very young patients, due to facial skeletal growth phase, active eruption and other factors.

» Another very interesting situation in which I advocate the use of composite resins is on patients whose teeth show adequate form and stabilized color - that is, 'very good teeth' - which suffered deterioration of functional nature over time on the incisors, small cervical erosions and which need only an esthetic restoration, without big interventions that may alter the features of the patient's smile. In cases like that, we do small strategic additions, without covering the whole surface of the tooth. This type of patient represents a great demand at my clinic - conscious people, who show awareness, and want the result to be imperceptible to others' eyes.

I would like to emphasize that the concept of natural esthetic is quite subjective and varies a lot among people, and even among dentists. We must understand that, regardless of using composite resin or ceramic. Each professional has a specific market niche and what matters is always performing well planned and executed biologically

compatible work, that meets the specific demand of every single patient. It is very hard to judge or criticize form or if the teeth are excessively white. These factors are frequently determined by the patient itself, who seeks it. Each professional is responsible for the Odontology they practice.

### Description of the clinical cases

**Case 1:** a 24-year-old patient, who sought the clinic after Orthodontic treatment, complaining about the anatomy of the upper anterior teeth. The patient mentioned in her report that she found her teeth too small and would like them to be bigger, showing better width/length proportion. She also mentioned that she wished for greater orthodontic proclination of the upper teeth in relation to the lower ones, improving the optical illusion of overbite. At first she attended the clinic focused on a search for 'contact lenses', which is very common nowadays, due to the dissemination of such technique in the media. The planning and the mock-up were done for the visualization and simulation of the treatment. That step is extremely important to the patient in their decision making, and also to observe if that was really the expected result. After positive feedback by the patient, she was given explanation on the need of doing minimally invasive preparations and she was told that 'contact lenses' did not fit her case. We emphasized the important of the preparation because, besides a better long-term result, that would allow maintaining her gingival health.



**Figure 1:** Initial photograph of the patient's face after orthodontic treatment.



**Figure 2:** Frontal photograph of the smile, where it is possible to see the slight lack of proportion of the central incisors, as reported by the patient.



**Figure 3:** Initial photograph, with lip retractor. The overbite was also mentioned during the initial clinical examination.



**Figure 4:** Photograph of the minimally invasive preparations, where we can see the discreet demarcation of the gingival margin, for obtaining a better cervical contouring.



**Figure 5:** Photograph with the retractor wire in place, for the impression procedures.



**Figure 6:** Photograph right after cementation.



**Figure 7 e 8:** Photographs of the first clinical control, after 15 days.

**Figure 9 e 10:** Final frontal photographs of the patient's face and smile, after restorative treatment.



**Case 2:** a 15-year-old patient whose birthday party was just a few months ahead. She went to the clinic with her mother, in search for better esthetic. She felt uneasy due to her gingival smile and its childish aspect, with very prominent mamelons and small teeth, in relation to her facial anatomy. With good planning and due to her age (still 14 at that time), we went for a work which was as conservative as possible. An interleaved surgery was necessary in order to improve the proportion of the teeth in the restorative work done afterwards.



**Figure 11:** Initial photograph of the patient's face, at the first appointment.



**Figure 12:** Initial frontal photograph of the patient's smile, where it is possible to notice the excessive exposure of gingival tissue, as well as the 'yellowish' color of the dentition.



**Figure 13:** Preoperative photograph, with lip retractor.



**Figure 14:** Photograph taken right after gingival plasty.



**Figure 15:** Preoperative image of the restorative stage, where we can see the anatomic 'failure' present in the elements #11 and #12.



**Figure 16:** Photograph showing the production and restoration of the composite resin, in the element #21.



**Figure 17 e 18:** Intra-oral photographs after finishing.

**Figure 19 e 20:** Final photographs of frontal smile and the patient's face, after the restorative treatment with direct composite resins.

