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Ceramic Laminates in Conoid Teeth: An integrative Literature Review

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Abstract *— The treatment of conoid teeth represents a challenge for the dental team, as few elements are available in most cases, making it difficult to obtain an aesthetic that advocates anatomical and color homogeneity among the elements involved. Conoid teeth are changes in the size and shape of natural teeth. These changes have an aesthetic effect on the patient's smile, as the affected teeth are smaller than normal and have a sharpened incisal surface. Based on the content presented, the following issue is raised: Why ceramic laminates can be indicated for use in conoid teeth? Thus, the aim of the study is to carry out an integrative literature review of ceramic veneers in conoid teeth. The methodology used was a literature review, with searches in databases following the criteria of articles published in the period from 2015 to 2021. When ceramic laminates are considered, different restorative approaches have been proposed, depending on the facet thickness and color of the remaining tooth structure. It is concluded that Ceramic veneers are a well-established treatment method for the conservative esthetic restoration of malformed teeth, such as conoids.*

I. INTRODUCTION

Currently, cosmetic needs are of fundamental importance for a large part of society. Among the available aesthetic restorative materials, professionals have options ranging from composite resins to ceramics. For a long time, the material of choice for cosmetic and conservative procedures was composite resin, however, its organic matrix degrades and absorbs water; therefore, the material needs constant maintenance and polishing to prolong its useful life (ABRANTES et al., 2019; MENEZES et al., 2015).

Porcelain greatly imitates the natural structure of dental elements and is an excellent option to avoid the various deficiencies of composite resin. When done well according to a precise clinical protocol, porcelain restorations have a long clinical life. The material has several important characteristics, including physicochemical stability, excellent biological compatibility, sufficient resistance to compression and abrasion, excellent reproduction of the optical properties of the tooth structure, adherence to cement and dental substrates, and color stability (GUGELMIN et al. , 2020; UZÊDA et al., 2020).

The idea behind minimally invasive cosmetic dentistry is that the clinician should choose the most conservative method possible, avoiding unnecessary wear and tear on the tooth structure, while restoring the patient's function and appearance. The development of minimally invasive dentistry was only possible thanks to technological advances in ceramic systems and the development of the adhesive cementation technique. Initially, dentists

cemented 0.5 mm thick laminated veneers onto an unprepared tooth surface. The material used was feldspathic ceramic, which has good clinical and laboratory sensitivity, especially in minimal thicknesses. However, gum inflammation was observed over time after cementation due to the overcontour created by these restorations. Therefore, dentists chose to limit dental preparations to the space needed for these restorations, in order to develop the original emergence profile of the teeth (ESPÍNDOLA-CASTRO et al., 2020).

The improvement of current ceramic systems, especially pressed ceramics reinforced with lithium disilicate, brought back the idea of unprepared laminates. Although these veneers reach thicknesses similar to those of feldspathic ceramics, lithium disilicate ceramics allow restorations up to 0.2 mm in thickness with greater clinical and laboratory ease. Due to their better mechanical properties, these restorations can be made, finished, tested and cemented more safely (SILAMI et al., 2016; ABRANTES et al., 2019).

The growing demand for esthetic restorations by patients and physicians, together with improvements in adhesive materials, composite resins and dental porcelains have provided the possibility of conservative and long-lasting esthetic treatments. Due to the natural appearance they provide with ceramic veneers, they are often the restoration of choice for anterior teeth. The use of ceramic laminates and composite resins has evolved into a predictable treatment method in terms of longevity, periodontal status and patient satisfaction (ESPÍNDOLA-CASTRO et al., 2020).

Ceramic laminates are a predictable option for creating a successful restorative treatment while preserving tooth structure throughout. In the case of conservative preparations, it is essential that there are two tools available during the diagnostic phases and part preparation procedures: diagnostic waxing and acrylic resin. If there is no need to mask the color, a minimal reduction in tooth structure allows the laminate radiolucency to give a natural appearance. Furthermore, an ultra-conservative preparation preserves the enamel available for bonding, thus increasing the prognosis for long-term bonding success (UZÊDA et al., 2020).

The main advantage of ceramic laminates is their aesthetics, in addition to less plaque accumulation when compared to composite resin and greater clinical longevity. In current longitudinal studies, ceramic veneers had a success rate above 90% after 10 years, when ceramic restorations were bonded using the adhesive technique. Dental preparation must preserve the enamel as much as possible, as when the ceramic veneer is cemented onto teeth prepared in dentin, success rates can drop to around 60%. Ceramic laminates have the advantage of greater clinical longevity compared to other techniques, in addition to providing reinforcement to the tooth structure (VENÂNCIO et al., 2015).

The disadvantages of ceramic laminates are the possibility of dentin sensitivity and difficulty in repairing in case of fracture. The construction of ceramic laminates exhibited a complex execution both in the clinical and laboratory stages (SILAMI et al., 2016).

It is always a great challenge to add color, shape, surface texture and individual characteristics in a restricted space, generating high costs. Irreversibility is also a disadvantage, because once installed, future correction is very limited. A ceramic laminate can only be removed with use and replaced by a crown (ESPÍNDOLA-CASTRO et al., 2020).

After understanding the ceramic laminates, it is essential to conceptualize conoid teeth. Classified as an anomaly of tooth size and shape, the conoid tooth is generally characterized by a smaller than normal size and a sharp tip that replaces the nearly flat surface characteristic of the incisal edge of the maxillary lateral incisors. This anomaly manifests itself more frequently, affecting about 1% of the population, and it is more common in females. It can also be associated with cases of agenesis or be part of the characteristic signs of a syndrome (OLIVEIRA et al., 2021).

This anomaly translates into aesthetic discomfort for the patient, as the appearance of these teeth is far from normal standards. The most common treatment modalities include direct or indirect composite resin restorations, with anterior treatment being preferred. However, this scenario was transformed due to the widest possible use of ceramics in order to obtain a more predictable and durable treatment result (SILVEIRA et al., 2017; VERONEZI et al., 2017).

Conoid teeth naturally present an ideal configuration to indicate the use of ceramic laminates for aesthetic restorative treatment as it is a procedure that only needs a light wear, in order to give resistance to the piece. This is currently a gold procedure due to the need for minimally invasive procedures and the material has excellent properties, such as piece longevity, biocompatibility, appearance similar to teeth, in addition to good color stability (ESPÍNDOLA-CASTRO et al. , 2020).

Based on the content presented, the following issue is raised: Why ceramic laminates can be indicated for use in conoid teeth? Thus, the aim of the study is to carry out an literature review of ceramic veneers in conoid teeth.

II. LITERATURE REVISION

2.1 Conoid teeth

Dental anomalies occur between the sixth and eighth week of intrauterine life, since at this stage the conversion of embryonic structures such as the dental sac, dental papilla and dental organ is performed, which in the histodifferentiation process will give rise to the formation of enamel, dentin and cement (LOBATO et al., 2019; OLIVEIRA; MIGUEL; MAGALHÃES, 2021).

Dental anomalies are defined as congenital malformations of dental tissues that occur as a result of changes that affect the natural process of odontogenesis, in which several genes intervene that regulate the process, if altered it can cause damage to the primary, permanent or both dentition, causing delay in the change from deciduous to permanent dentition and, sometimes, lack of development of the jaws; in addition to affecting characteristics such as number, size, shape, structure and color of some or all teeth (LOBATO et al., 2019; REIS et al., 2016; SANTOS et al., 2015).

Microdontia is a dental variation that is distinguished by a reduction in the mesiodistal and cervico-incisal diameter (by coronary alteration or level of the gingival margins) of the dental crown, which is why they are considered small teeth with adequate anatomy. It can occur in a generalized way or in a single tooth, with the upper lateral incisor being the one that most frequently presents changes in size and shape (SILVA et al., 2016).

Tapered teeth were described by Dr. Grahnén as those teeth in which the mediodistal incisal width (incisal width) of the ring is less than the cervical width (the width of the area close to the gum line). It is an anomaly in the shape of the teeth, as they present an abnormal shape, and the affected tooth has a conical appearance. Conoid teeth have a prevalence of 0.6 to 9.9%. About 55 people are affected by cone-shaped upper lateral teeth, with women more prone than men (LOBATO et al., 2019; REIS et al., 2016).

Proportional microdonism is usually associated with dwarfism due to hypofunction of the pituitary gland. Small teeth in normal or large jaws may be due to cross-inheritance. Regression or atavism may be the cause of the rudimentary development of individual teeth, which take the cone or haplodon shape of the reptile or fish dentition. This abnormality is often inherited and occurs especially in the weaker teeth, the upper second incisors (SILVEIRA et al., 2015).

This anomaly can generate a lack or excess of space, unfavoring the arch length, not only involving aesthetics, but also impairing occlusion, since the tooth could adopt an incorrect position. Its etiology is related to hereditary, environmental, genetic and epigenetic factors. A possible method to diagnose microdontia of the upper lateral incisor when it is smaller, equal to or up to 0.7 mm wider than the mandibular lateral incisor, the result would be an excess of lower dental material in relation to the upper one (AGUIRRE et al., 2015).

Microdontia in any tooth can cause changes in the sagittal dimensions of the arch and these can be treated through restorative procedures to preserve esthetics and occlusion, taking into account a multidisciplinary diagnosis that includes evaluation for periodontics, orthodontics, rehabilitation and endodontics. Therefore, it is necessary to consider several factors, both aesthetic, functional, social and cultural (SILVA et al., 2016).

Patients with conical teeth can be successfully treated. Dentistry today offers several treatment options depending on the patient's expectations and the clinician's experience. Current dentistry offers several types of treatments for this anomaly, improving the esthetic zone and, of course, the smile: crowns, dental restorations or ceramic laminates, the focus of this work.

2.2 Ceramic laminates

Ceramic veneers (LC), which are chosen to provide excellent esthetics, are a well-established treatment method for the conservative esthetic restoration of malformed, discolored, misaligned, traumatized, fractured and worn anterior teeth. The recommended surface preparation within the enamel and adhesive cementation facilitate restoration with minimal loss of healthy tooth structure (ABRANTES et al., 2019).

The use of LCs with minimal preparation and no preparation can achieve the desired aesthetic result in a conservative manner. Initially, LCs were fabricated from stacked feldspathic porcelain and used in an “unprepared” manner 0.5–0.7 mm thick. While not removing healthy tooth structure was admirable, it often provided less-than-desirable results. The laminates often looked bulky and the soft tissue showed signs of irritation. It is important to remember that the ultimate goal of any dental treatment is to restore health and function, as well as esthetics, using the most conservative treatment method available (ESPÍNDOLA-CASTRO et al., 2020).

Recent marketing efforts by dental manufacturers and labs, aimed at dentists and consumers, have advocated “unprepared” laminates as a tooth structure preservation option that is aesthetically equivalent to or better than laminates that require preparation. The desired final position, shade and shape of the restoration should be the main determinants of the level of reduction. There are many significant advantages in preserving tooth structure, including lack of need for anesthesia, lack of post-

operative sensitivity, enamel bonding, minimal bending stress, longer lasting restorations, potential reversal, and higher levels of treatment acceptance between the patients. Patients with small or lingually positioned teeth should be considered ideal candidates for techniques that involve no or minimal preparation (ABRANTES et al., 2019; MONTENEGRO; SILVA; PINTO, 2015).

As LCs continued to evolve, a minimally invasive approach was used to provide a more esthetic and biologically compatible restoration. A minimum preparation of 0.5 mm was used to allow the placement of laminates, to be able to adequately mask unsightly areas and/or change the color, in addition to providing the minimum resistance necessary for the manufacture and delivery of the LC. Dental preparations for CLs require 3% to 30% of the tooth structure by weight and a quarter to half the amount of tooth reduction of conventional full coverage crowns (ESPÍNDOLA-CASTRO et al., 2020).

2.2.1 Incisal Preparation

Different designs of dental preparations have been described such as the fringed incisal edge, the 0.5–1 mm incisal bevel, the intra-enamel (or window) and the overlapping incisal edge preparations. There are different reports on whether the incisal edge should be included in the preparation for LCs. Castelnuovo et al. in 2000 they reported that the elimination of the palatal chamfer for VCs with incisal butt joints resulted in stronger restorations and simplified tooth preparation. They also suggested that the faciopalatal path of insertion allowed for easier seating of multiple facets and eliminated the risk of fracture of thin, unsupported palatal ceramic protrusions (GUGELMIN et al., 2020).

The current trend when teeth are prepared for LCs is to include the incisal edge by chamfering or through overlapping. A silicone index is more useful than a depth gauge drill when preparing the palatal surface and reducing the incisal edge, with a depth gauge drill having limited application in this situation (GUGELMIN et al., 2020; TOMASELLI et al. , 2019).

2.2.2 Lip preparation

There are several methods to achieve the required reduction with preparation: freehand, use of depth cuts / grooves (the use of depth cutters or grooves and dimples has been recommended to control tooth preparation as the use of standardized objects allows accurate judgment of depth), and use of silicone or temporary mass index (the use of silicone index derived from wax-up allows visualization of the reduction needed to achieve the shape and contours of the pre-planned shape and length of the final facets) (OLIVEIRA JÚNIOR et al., 2019).

2.2.3 Interproximal Extension

There is no conclusive evidence on what is the best way to prepare the interproximal area of a tooth for an LC. Options range from virtually no preparation to a preparation just before interproximal contact to a slight opening of the interproximal contact. Breaking the contact (sometimes called “slice preparation”) may be necessary to clean the contact in certain situations, such as changing the shape or position of teeth and in the case of multiple facets. With the additional interproximal space, this allows freedom to adjust the contours and position of the teeth (MONTENEGRO; SILVA; PINTO, 2015; SILAMI et al., 2016).

2.2.4 Cervical margin

The desired position for the finish line of the varnish is just within the limits of the gingival sulcus. There is no reason to hide the interface subgingivally unless a drastic color change is desired. The finish line configuration must be chamfered. From a laboratory standpoint, it is extremely beneficial for the dentist to place at least one light bevel finish line so the ceramist clearly knows where to build the porcelain. In tetracycline-stained cases, it is desirable to go further subgingivally to mask the dark coloration in the cervical region. In this situation, it may also be necessary to remove some more of the tooth structure. Conventional diamond burs leave a macroscopically rough surface on the enamel. Additional tooth preparation using a small particle size diamond drill or a multiflute tungsten carbide finish drill will smooth the surface of the preparation and can be used to refine the finishing margin (OLIVEIRA JÚNIOR et al., 2019).

The success of the LC technique involves paying close attention to detail for the following: case planning, conservative preparation (to save enamel) of teeth, proper ceramic selection, proper selection of cementation materials and methods, proper finishing and polishing of restorations, and adequate planning for the continued maintenance of restorations (ABRANTES et al., 2019).

2.2.5 Material Selection

To improve the esthetics of anterior teeth through laminated veneers, two types of materials are indicated for their translucency and potential to be used in small thicknesses: sintered feldspathic porcelain and pressable ceramic, which can also be milled using a computer-aided manufacturing technique (OLIVEIRA et al., 2021).

Type I patients are candidates for conventional ceramics, while type II patients require high-strength ceramics. Type IB patients require simple esthetic veneers, although in this case the substrate teeth present color changes. Therefore, regardless of the need for shape

modifications, the ceramic material selected must be able to hide the color of the underlying substrate. In these cases, both porcelain and cement must have varying degrees of opacity to hide color changes. In type II patients, high-strength feldspar or alumina ceramics and oxide ceramics are indicated (GUGELMIN et al., 2020).

2.2.6 Cementation

There are many systems that have water-soluble, color corrected try-in gels; optimum viscosity levels; and color stable resin cements, opaque and color modifiers. Once properly cemented, LCs become an integral part of the tooth structure and share part of the applied load stresses during the chewing cycle. For cementation of LCs, a light-curing cementitious composite is preferred. In the case of ceramics with a thickness greater than 0.7 mm, the light-curing composite resins from not reach their maximum hardness. In these situations, dual polymerization cementation composite is advisable (ABRANTES et al., 2019).

The success of the porcelain veneer is determined by the strength and durability of the bond formed between the three different components of the veneer complex: the tooth surface, the porcelain veneer, and the cement composite. Magnification may be preferred for cementation procedures. Laminates should be evaluated in the laboratory model for proper seating and marginal fit. Rubber dam is essential for the lower teeth to isolate the lip and tongue and control moisture (OLIVEIRA JÚNIOR et al., 2020).

2.2.7 Clinical studies

The success rate of LCs was evaluated and shown a range from 18 months to 20 years; the success rate reported in these studies ranges between 75% and 100%. Fracture, microleakage and detachment are types of failure observed in LCs (ABRANTES et al., 2019).

The preparation of teeth greatly influences the durability and color of the ceramic restoration, as the dental preparation will determine the internal surface contour and thickness of the ceramic material. The laminate requires a minimum of 0.2 mm to (ideally) 0.3 mm thick for each shade change. Ceramic translucency also plays an important role in light penetration (TOMASELLI et al., 2019).

Patients with bruxism or tooth-to-foreign body contact may not be ideal candidates for veneers. In cases of minor incisal wear due to bruxism, it is often possible to restore the incisal length using LCs. It is very important to evaluate the occlusal scheme and control the occlusal forces before attempting any LC treatment. In these cases, an occlusal protection is indicated to help prevent postoperative ceramic fractures (ABRANTES et al., 2019; ESPÍNDOLA-CASTRO et al., 2020).

The adhesion complex between porcelain, cementitious composite and enamel is considered a great advantage of porcelain veneers. It has been reported that the bond strength of this complex is about 63 MPa, while the bond between the composite and enamel is about 31 MPa and between the composite and porcelain alone is 33 MPa (MONTENEGRO; SILVA; PINTO, 2015; SILAMI et al. ., 2016).

III. MATERIALS AND METHODS

Literature review, with a qualitative approach, whose data collection was carried out from April to October 2021. A search and selection of articles related to the topic was carried out, in which the search criteria taken into account were: scientific articles from journals or electronic databases such as PubMed and Scielo, using the keywords “microdontics”, “conoid teeth” and “ceramic laminates”, which should meet the publication requirement in the last 05 years. Fifteen articles that met the criteria of this review were selected.

IV. RESULTS AND DISCUSSION

When performing the first search, a total of 271 articles were found in the databases. Afterwards, when the titles of these articles were read, 186 were selected. When reading the abstracts, only 102 articles remained and, finally, by adopting the inclusion criteria, only 15 articles comprised the present literature review. work, as illustrated in Figure 1.

When ceramic laminates are considered, different restorative approaches have been proposed, depending on the thickness of the veneer and the color of the remaining tooth structure. In the case of improving esthetics by changing the shape and texture of the teeth without severe discoloration, thinner veneers may be indicated. After being informed about the advantages and disadvantages of each restorative option (GUGELMIN et al., 2020; MONTENEGRO; SILVA; PINTO, 2015; SILAMI et al., 2016).

One of the most common materials used to make laminates is feldspathic porcelain. The main component of feldspathic porcelain is feldspar; a naturally occurring glass that contains silicon oxide, aluminum oxide, potassium oxide and sodium oxide. Feldspathic porcelain has many advantages; the material is very thin so it can be almost translucent, resulting in a natural looking restoration. Furthermore, it requires minimal dental preparation. Therefore, the enamel can be preserved.

Furthermore, it is possible to etch feldspathic porcelain with hydrofluoric acid, which gives a great bond strength to the remaining enamel (ABRANTES et al., 2019; ESPÍNDOLA-CASTRO et al., 2020; TOMASELLI et al., 2019).

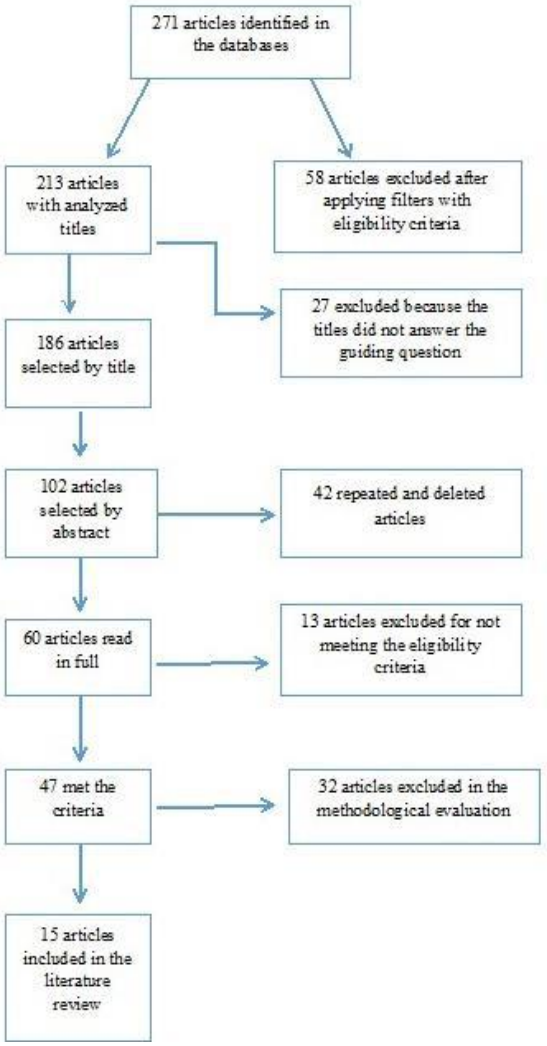

Fig.1: Selection of studies for the review.

Source: The authors themselves, 2021.

Feldspathic porcelain has some disadvantages. The manufacture of feldspathic porcelain can be done by two methods: the refractory matrix technique and the platinum sheet technique (ESPÍNDOLA-CASTRO et al., 2020). These methods are sensitive to the technique and the varnish manufactured requires good care before bonding (OLIVEIRA JÚNIOR et al., 2020). Also, masking discolored teeth can be difficult because porcelain is so thin. In addition, it has been reported that acid etching of the internal surface of the porcelain can cause microcracks that can lead to a decrease in the flexural strength of the porcelain and, eventually, fracture the laminate (GUGELMIN et al., 2020; MONTENEGRO; SILVA; PINTO, 2015 ; SILAMI et al., 2016).

The in vitro study by Espíndola-Castro et al. (2020) suggests that extracted teeth that are restored with porcelain veneers have regained their original strength. Meanwhile, Oliveira et al. (2021) and Oliveira Júnior et al. (2020) point out that this may explain the low failure rate (0 - 5%) in clinical studies due to detachment of the porcelain laminate, especially when there is a lack of parafunctional habits.

Respectively, some authors have reported that when porcelain veneers are bonded to composites instead of enamel, porcelain veneers tend to have a higher failure rate (ABRANTES et al., 2019; GUGELMIN et al., 2020; TOMASELLI et al. , 2019).

Many studies have investigated the longevity of porcelain veneers. Beier et al. (2017) reported in a retrospective clinical study a survival rate of 94.4% after five years and 93.5% after ten years; they found that the main reason for failure is a ceramic fracture. A randomized clinical trial by Layton and Walton (2016) showed similar results, with a survival rate of 96% after ten years and 91% after 20 years. In addition, Smales and Etemadi (2018) reported a 95% survival rate for porcelain veneers over 7 years. It is essential to emphasize that these studies and others (Abrantes et al., 2019; Gugelmin et al., 2020; Oliveira et al., 2021) that reported a high survival rate of porcelain veneers had a rigorous evaluation of the remnant enamel and systems stickers. As a result, careful and conservative preparation and optimal isolation during cementation are necessary to ensure predictable results.

There are other studies that report a lower survival rate for porcelain veneers. A retrospective study of 2,563 laminates in 1,177 patients by Burke and Lucarotti (2019) reported a survival rate of 53% at 10 years. The material type of the laminates was not reported. In addition, the study evaluated facets made by the general dental service and, therefore, it is possible that tooth preparations did not meet specialist level criteria. Another retrospective study was carried out by Shaini et al. (2017) reported a survival rate of 47% at 7 years. The laminates were made by graduate students and staff members at the University of Birmingham, UK. The study reported that over 90% of veneers were placed on unprepared teeth, which may be a reason for the high failure rate, as it is suggested that the bond to aprismatic enamel is much weaker than prepared enamel.

In addition to the optical characteristic similar to the tooth structure, glass-ceramic materials have good adhesion characteristics to the tooth structure. This increase in retention is mainly related to the use of

hydrofluoric acid to condition their internal surfaces, associated with the use of silane bonding agents (TOMASELLI et al., 2019). Furthermore, when dental preparation is restricted to enamel, a better and more reliable bond can be obtained (OLIVEIRA et al., 2021; OLIVEIRA JÚNIOR et al., 2020)

Many studies used a light-curing resin-based cement. This type of cement is an appropriate choice for cementing indirect facets in terms of bond strength and increased working time. The use of light-curing materials for the cementation of veneers, however, is based on the idea that light could easily pass through the indirect restoration due to its translucency and reduced thickness. A concern related to light transmittance through ceramic materials and its influence on the degree of cement conversion and mechanical properties should be raised (ABRANTES et al., 2019; GUGELMIN et al., 2020; OLIVEIRA et al., 2021; TOMASELLI et al., 2019).

It should be noted that even when dual resin cements are employed, light activation plays an important role in the degree of conversion of the material. (Oliveira et al., 2021) Another aspect to be considered when cementing laminates with materials that depend on the light transmission capacity through the ceramic is that not all light curing devices are equal and that different curing properties can be achieved for the same curing unit if used with a fiber optic or polymer light guide tip (GUGELMIN et al., 2020; MONTENEGRO; SILVA; PINTO, 2015; SILAMI et al., 2016).

Impaired vision of malformed teeth, such as conoid laterals or microdontia, can be successfully improved by porcelain or ceramic restorations. A precise and interdisciplinary diagnostic approach is recommended to obtain aesthetic, conservative, predictable and lasting results in the maxillary anterior dentition (ABRANTES et al., 2019; GUGELMIN et al., 2020; TOMASELLI et al., 2019). In this sense, Silami et al. (2016), showed in their studies that diagnostic additive waxing, aesthetic elongation of the clinical crown, direct acrylic mock-up, cementation procedures, direct restorations with composite resin used for the aesthetic rehabilitation of a patient with conoid lateral incisors, and a unsatisfactory Class IV restorations in the central incisor were presented and, as an alternative, ceramic veneers, ensuring their practicality and duration, unlike other techniques already used in the study patient.

Corroborating the previous notes, Abrantes et al. (2019) mention that ceramic laminates are one of the most used cosmetic dentistry services in the market. Many dentists use laminates as a solution for certain forms of microdontia, especially conoid teeth. As much dental preparation is not required before placing the veneers, the already small tooth does not need to be further compacted or shrunk. Ceramic, a strong, high-quality material, helps make the new tooth natural while making the teeth more durable.

Gugelmin et al. (2020) and Oliveira et al. (2021) reinforce that porcelain materials have great biocompatibility and, concomitantly, can maintain favorable dental esthetics and patient satisfaction. These studies, with evaluation times ranging from 5 to 20 years, support that therapy with ceramic veneers in conoid teeth has a favorable clinical performance.

Lobato et al. (2019) suggested that the success of the ceramic veneer technique on conoid teeth involves paying close attention to detail for the following: case planning, conservative preparation (to save enamel) of teeth, proper selection of ceramics, proper selection of materials and methods adequate cementation, finishing and polishing of restorations, and adequate planning for ongoing maintenance.

V. CONCLUSION

Given the above, the following conclusions can be drawn:

- The minimally invasive aesthetic dentistry professional should choose the most conservative method possible, avoiding unnecessary wear and tear on the tooth structure;

- Conoid teeth are changes in size and shape of natural teeth. These changes have an aesthetic effect on the patient's smile, as the affected teeth are smaller than normal and have a sharpened incisal surface;

- Ceramic laminates are a well-established treatment method for the conservative aesthetic restoration of malformed teeth, such as conoids;

- Ceramic laminates on conoid teeth, when made according to the proper indications and a precise clinical protocol, offer excellent longevity and appearance.

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