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INTEGRATION OF ANTI-AGING MEDICINE IN AESTHETIC DENTISTRY: POTENTIAL BENEFITS FOR OROFACIAL HARMONIZATION

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ABSTRACT

Anti-aging medicine has significantly advanced within the field of aesthetic dentistry, expanding the scope of orofacial harmonization through regenerative techniques and innovative biomaterials. The aim of this study was to conduct an integrative literature review, based on 20 articles published between 2015 and 2025, retrieved from recognized scientific databases, to evaluate the potential benefits of integrating anti-aging medicine into aesthetic dentistry. The results demonstrated that hyaluronic acid (HA) plays a central role due to its immediate volumizing capacity, hydration, and stimulation of tissue regeneration, showing superior outcomes when combined with adjunctive therapies such as platelet-rich growth factors (PRGF) and ozone. Collagen biostimulators, including poly-L-lactic acid (PLLA) and calcium hydroxyapatite (CaHA), proved effective in inducing neocollagenesis, increasing dermal thickness, and improving facial elasticity, consolidating their role as valuable tools in the fight against aging. Despite these advances, methodological limitations such as small sample sizes and heterogeneous protocols highlight the need for multicenter and standardized clinical trials. In conclusion, the integration of anti-aging medicine into aesthetic dentistry represents a promising approach, capable of providing more durable aesthetic and functional outcomes, aligned with the promotion of health, longevity, and patients' quality of life.

Keywords: Aesthetic dentistry; Anti-aging; Dermal fillers; Orofacial harmonization; Tissue regeneration.

INTRODUCTION

Facial aging is a multifactorial process that involves progressive changes in soft tissues, bone, and dentition, directly impacting orofacial aesthetics and function. These changes include bone resorption, loss of collagen and elastin, fat redistribution, decreased muscle tone, and periodontal and peri-implant alterations [1,2]. Such modifications lead

not only to functional consequences but also to psychological and social repercussions, since the perception of facial aging is closely linked to self-esteem and quality of life [3,4]. In this context, orofacial harmonization (OFH) has emerged as a set of aesthetic and functional procedures aimed at restoring facial symmetry, balance, and youthfulness, integrating dentistry into advanced aesthetic practices [5,6].

In recent years, aesthetic dentistry has incorporated principles of anti-aging medicine, seeking not only immediate results but also interventions capable of stimulating regenerative processes and delaying the signs of aging [7,8]. Substances such as hyaluronic acid (HA) and collagen biostimulators (e.g., poly-L-lactic acid, calcium hydroxyapatite, polycaprolactone) have been widely studied for their potential to promote neocollagenesis, increase dermal thickness, improve elasticity, and provide long-lasting results [9,10]. Randomized clinical trials have demonstrated that the application of HA, whether alone or combined with platelet-rich growth factors, produces significant improvements in interdental volume and esthetics, expanding the prospects for its use in both dental and facial contexts [1,11,14].

Furthermore, the literature shows that the use of biostimulators such as Rennova Elleva (PLLA) results in high patient satisfaction, with improvements in skin firmness, lifting effect, and increased dermal thickness, highlighting its potential as a promising resource in orofacial harmonization [4]. Recent laboratory studies confirm that the morphological and chemical characteristics of these biomaterial particles directly influence tissue integration, inflammatory response, and safety profile [2,15]. However, complications such as nodules and granulomas have also been reported, underscoring the need for strict criteria regarding indication, application, and follow-up [7].

Anti-aging medicine applied to aesthetic dentistry goes beyond the immediate aesthetic dimension and incorporates a regenerative perspective, integrating innovative approaches such as the association of HA with ozone, with anti-inflammatory and healing effects [9], and the use of HA in periodontal and peri-implant therapy, capable of enhancing wound healing and tissue stability [12,13]. Clinical trials have shown that the adjunctive use of HA in periodontal therapies significantly improves clinical and aesthetic parameters, reinforcing the role of this biomaterial at the interface between oral health and facial rejuvenation [10,14].

Recent reviews consolidate the view that OFH, as an interdisciplinary field, finds strong scientific support in the integration with anti-aging medicine, both in terms of safety and clinical efficacy [5,6,16,19,20]. The development of new application protocols, such as pan-facial filler layering [17], and the conduction of clinical trials targeting midface rejuvenation [18], reinforce the growing trend of research directed toward regenerative and aesthetic integration.

Therefore, the present study aims to conduct an integrative literature review, complemented by meta-analysis whenever possible, in order to evaluate the potential benefits of integrating anti-aging medicine into aesthetic dental treatments, with a special

focus on orofacial harmonization. This study seeks to critically compile and analyze the evidence available since 2015, highlighting both advances and gaps in knowledge, to provide scientific support for clinical practice and future research in this expanding field.

METHODOLOGY

This study is characterized as an integrative literature review, with the possibility of meta-analysis whenever the available data presented statistical homogeneity. The methodological recommendations proposed by Whittemore and Knafl, as well as the guidelines from the PRISMA 2020 checklist, were followed to ensure standardization, transparency, and reproducibility. The literature search was conducted between August and September 2025 in the PubMed/MEDLINE, Embase, Web of Science, Scopus, and LILACS/BVS databases. Additionally, records of clinical trials were consulted on the ClinicalTrials.gov platform in order to identify emerging evidence related to the topic. For the search strategy, descriptors in English and Portuguese were used, combined with Boolean operators, including terms such as “anti-aging,” “antiage,” “rejuvenation,” “senescence,” “regenerative,” “dentistry,” “odontologia,” “orofacial,” “facial aesthetics,” “harmonization,” “hyaluronic acid,” “collagen biostimulator,” “botulinum toxin,” “filler,” “stem cell,” “platelet-rich plasma,” and “ozone therapy.”

Articles published between January 2015 and September 2025 were included if written in English, Portuguese, or Spanish, encompassing randomized clinical trials, cohort studies, controlled observational research, systematic reviews, and robust narrative reviews addressing the application of substances or techniques with anti-aging potential in aesthetic dentistry or orofacial harmonization. Exclusion criteria comprised studies conducted exclusively in vitro or with animal models, unless they presented high translational relevance; duplicate publications across databases; studies directed toward non-dental areas without direct applicability to the orofacial context; and isolated case reports without statistical analysis.

The study selection process occurred in three successive stages: title and abstract screening for initial triage, full-text reading of potentially eligible studies, and final application of the predetermined inclusion and exclusion criteria. At the end of this process, 20 articles were deemed adequate to compose the final review sample. A PRISMA flowchart was created to visually illustrate the phases of identification, screening, eligibility, and inclusion of studies.

Data extraction was conducted in a standardized manner, recording information such as authors, year of publication, country, study design, population and sample size, interventions performed (substances applied, protocols, doses, and techniques), outcomes assessed, main findings, and limitations reported by the authors. To ensure analytical rigor, the methodological quality of randomized clinical trials was assessed using the Cochrane Risk of Bias tool, while systematic reviews were evaluated according to the AMSTAR 2 checklist. Whenever possible, the quantitative data extracted were

synthesized and subjected to statistical analysis for the composition of meta-analyses, including the calculation of mean differences, relative risk, and heterogeneity assessment using the I^2 index.

RESULTS

The systematic search yielded 20 articles that met the inclusion criteria and comprised the final sample of this integrative review. The selected studies included randomized clinical trials, observational studies, narrative and systematic reviews, as well as records of ongoing clinical trials. The narrative synthesis highlights that anti-aging–based interventions, especially the use of hyaluronic acid (HA) and collagen biostimulators (PLLA, CaHA, PCL), represent the main therapeutic resources applied in aesthetic dentistry and orofacial harmonization.

Randomized clinical trials demonstrated that HA application, either alone or combined with platelet-rich growth factors (PRGF), provided superior esthetic outcomes in interdental papilla regeneration, with volumetric gains and high patient satisfaction [1]. Similarly, other studies showed that combining HA with regenerative therapies, such as ozone [9] and adjuvant periodontal protocols [10,14], enhanced its healing, anti-inflammatory, and esthetic effects, consolidating the role of this biomaterial as an anti-aging agent within dental contexts. Systematic reviews confirmed that HA is widely used in different dental specialties, with direct impact on facial and peri-implant esthetics [3,12,13].

Collagen biostimulators emerged as promising resources since, in addition to immediate volumization, they stimulate neocollagenesis and promote improvements in skin elasticity. Clinical studies with Rennova Elleva (PLLA) demonstrated significant results in dermal thickness, firmness, and lifting effect, along with high patient satisfaction [4]. Narrative reviews emphasized the importance of understanding the physical and chemical properties of these biomaterials [2,5,6,15,16], while cross-sectional studies warned about potential complications, such as nodules and granulomas [7], underscoring the need for well-defined safety protocols.

In the field of emerging trends, ongoing clinical trial records highlight innovative HA application techniques such as pan-facial layering [17], as well as interventions aimed at midface rejuvenation [18], both pointing toward broader and more personalized application protocols. Comprehensive reviews on orofacial harmonization confirmed the clinical and esthetic benefits of these procedures, reinforcing their role in combating the signs of facial aging [19,20].

Overall, the integrated analysis of the studies shows that incorporating anti-aging medicine into aesthetic dentistry offers benefits that go beyond immediate esthetics, including regenerative effects, greater durability of results, and overall improvement in patients' quality of life. However, long-term clinical studies with greater methodological

standardization are still needed to consolidate robust evidence and enable meta-analyses with greater statistical power.

Table 1. General characteristics of the studies included in the review

No.	Authors/Year	Study type	Population/Sample	Main intervention
1	Bal A et al., 2023	Randomized clinical trial	21 patients, 34 sites	HA vs HA + PRGF
2	Nobre MM et al., 2025	Laboratory study	Commercial products	Particle analysis of CaHA
3	Maci M et al., 2024	Systematic review	-	BoNT-A + HA in dentistry
4	Bravo BSF et al., 2024	Prospective study	30 patients	Rennova Elleva (PLLA)
5	JCM Júnior et al., 2023	Narrative review	-	Biostimulators in OFH
6	Naka CH et al., 2024	Narrative review	-	Biostimulators in rejuvenation
7	Ianhez M et al., 2024	Cross-sectional study	80 patients	Complications with biostimulators
8	Fisher SM et al., 2024	Narrative review	-	Biostimulators as adjuncts
9	Rosa A et al., 2024	Experimental clinical study	40 patients	HA + ozone
10	Atagün ÖS et al., 2025	Clinical trial	50 patients	Membrane with 0.2% HA
11	Alkhatib MN et al., 2025	Clinical trial	45 patients	Dermabrasion + HA
12	López-Valverde N et al., 2025	Narrative review	-	HA in peri-implant therapy
13	Alhashmi R et al., 2025	Systematic review	25 articles	HA in dentistry
14	Olszewska-Czyz I et al., 2021	Randomized clinical trial	60 patients	HA in periodontics

15	Santos AR et al., 2023	Integrative review	-	Tissue integration of biostimulators
16	Costa R et al., 2022	Narrative review	-	Semi-permanent biostimulators
17	NCT07063511, 2023	Clinical trial registry	Ongoing	Pan-facial layering of HA
18	NCT05963204, 2023	Clinical trial registry	Ongoing	Midface products
19	Silva J et al., 2025	Systematic review	40 studies	Clinical outcomes in OFH
20	Oliveira F et al., 2023	Narrative review	-	State of the art in OFH

Table 2. Main outcomes and results of the included studies

No.	Outcomes evaluated	Main results	Limitations
1	Interdental volume, esthetics	HA + PRGF superior to HA alone	Small sample size
2	Particle morphology	Different profiles across products	In vitro study
3	Clinical indications of BoNT-A+HA	Consolidated efficacy	Lack of standardization
4	Dermal thickness, satisfaction	Significant improvement	Short follow-up
5	Role of biostimulators	Reported benefits	Narrative review
6	Rejuvenation with biostimulators	Positive effects	No quantitative data
7	Clinical complications	Nodules and granulomas	Cross-sectional only
8	Adjunctive use	Complementary potential	Narrative basis
9	Anti-inflammatory effect	Reduced inflammation and pain	Limited sample
10	Periodontal healing	Improved tissue integration	Short follow-up
11	Facial scars	HA improved texture	Small n

12	Peri-implant therapy	HA regenerative role	Narrative review
13	Dental applications	Broad benefits	Heterogeneity
14	Clinical periodontics	Improved clinical parameters	Limited sample
15	Cellular integration of biostimulators	Reported neocollagenesis	Integrative review
16	Semi-permanent biostimulators	Good esthetic efficacy	Narrative review
17	Midface rejuvenation	Ongoing trial	No final results
18	Facial products	Ongoing evaluation	No final results
19	Orofacial harmonization	Esthetic and safety improvements	Heterogeneity
20	State of the art in OFH	Techniques consolidated	Narrative review

In an integrated perspective, the 20 studies analyzed demonstrate that incorporating anti-aging therapies into aesthetic dentistry and orofacial harmonization provides consistent evidence of clinical and esthetic benefits. Randomized clinical trials [1,10,11,14] reinforce the efficacy of HA as a central agent, not only for immediate volumization but also for its regenerative capacity when combined with adjunctive therapies such as PRGF and ozone [1,9]. This multifunctional role suggests that HA should be considered a first-line tool within integrative esthetic protocols.

Collagen biostimulators, particularly poly-L-lactic acid (PLLA) and calcium hydroxyapatite (CaHA), proved effective in stimulating neocollagenesis, increasing dermal thickness, and promoting the so-called “lifting effect” [4,5,6]. Prospective studies and reviews [2,4,15,16] indicate that tissue response is directly related to the composition, morphology, and application technique of these biomaterials, making them important allies of anti-aging medicine applied to facial esthetics. Nevertheless, the literature also reports potential complications such as granulomas and nodules [7], emphasizing the importance of strict selection criteria and adequate professional training.

The systematic and narrative reviews analyzed [3,12,13,19,20] consolidate the understanding that both hyaluronic acid and biostimulators occupy a central role in contemporary orofacial harmonization, legitimizing aesthetic dentistry as part of advanced esthetic practice. Moreover, the ongoing clinical trial records [17,18] demonstrate the growing expansion of scientific research directed toward innovative application techniques, such as pan-facial filler layering, and global midface rejuvenation, pointing to a future of broader and more personalized protocols.

Another relevant finding is the contribution of anti-aging therapies beyond immediate esthetics. The use of HA in periodontal and peri-implant contexts [10,12,14] reveals a regenerative dimension that transcends dental esthetics, expanding the scope of practice to comprehensive patient care. These findings reinforce the notion that integrating anti-aging medicine with aesthetic dentistry should not be understood solely as a quest for facial rejuvenation, but also as a strategy for promoting oral health and enhancing overall quality of life.

Thus, the results of this integrative review suggest that anti-aging medicine applied to aesthetic dentistry represents a promising approach, supported by clinical and laboratory evidence that confirm its efficacy and safety. The benefits include interdental papilla restoration, esthetic improvement of facial scars, and functional gains in periodontal and peri-implant tissues. However, despite the positive evidence, methodological limitations observed in some studies — such as small sample sizes, lack of long-term follow-up, and heterogeneity in protocols — highlight the need for multicenter, standardized, and statistically robust clinical trials.

Therefore, the global analysis of the included articles indicates that integrating anti-aging medicine into aesthetic dentistry and orofacial harmonization is a growing trend, with promising clinical results and expanding scientific support. This integration points not only to esthetic advancement but also to a conceptual transformation in dental practice, which increasingly incorporates the principles of regeneration, longevity, and humanization of health care.

DISCUSSION

This integrative review demonstrated that the integration of anti-aging medicine into aesthetic dentistry, particularly in orofacial harmonization, represents a consolidated trend supported by both clinical and laboratory evidence. The findings confirm that the main substances applied in this context—hyaluronic acid (HA) and collagen biostimulators (PLLA, CaHA, and PCL)—not only provide immediate esthetic effects but also exert regenerative impacts, modulating biological processes associated with aging.

Hyaluronic acid showed significant benefits in randomized clinical trials, acting both in tissue volumization and in regeneration and healing [1,10,11,14]. Its mechanism is related to its ability to attract water molecules and stimulate fibroblasts, resulting in greater hydration, dermal thickness, and skin elasticity. When combined with adjuvant therapies such as platelet-rich growth factors (PRGF) and ozone, its anti-inflammatory and healing effects were enhanced, with superior outcomes in interdental papilla regeneration and periodontal stability [1,9,12]. This versatility reinforces the role of HA as a key biomaterial not only for facial esthetics but also for the health of dental supporting tissues.

Collagen biostimulators demonstrated significant outcomes in inducing neocollagenesis, with evidence of progressive improvement in skin firmness, dermal thickness, and facial contour restoration [4,5,6]. Unlike HA, which produces more immediate effects, biostimulators offer a gradual and cumulative response, reflecting the central principle of anti-aging medicine by targeting cellular mechanisms of aging. Prospective studies with Rennova Elleva (PLLA) reported high patient satisfaction, lifting effect, and sustained clinical improvement [4]. However, the literature also documents complications such as nodules and granulomas [7], underscoring the need for proper technical training, standardized protocols, and careful patient selection.

Another relevant point concerns the integration of dental practice with techniques traditionally associated with dermatology and aesthetic medicine. Systematic reviews confirm the expanding role of dentists in applying botulinum toxin and facial fillers, legitimizing aesthetic dentistry as an interdisciplinary field [3,19,20]. This expansion of scope aligns with the philosophy of anti-aging medicine by proposing not only the reversal of facial signs but also the promotion of tissue longevity and the preservation of facial function.

Critical analysis of the studies also reveals important gaps. Most publications consist of narrative or systematic reviews with methodological heterogeneity [5,6,13,16,19,20]. Many clinical trials involve small samples, short follow-up periods, and a lack of standardized application protocols [1,10,11,14]. Moreover, few studies explore long-term outcomes or objective measurements of biological parameters related to aging, such as collagen or elastin markers. Ongoing clinical trials [17,18] promise to expand the evidence base with innovative protocols, such as pan-facial layering and new biostimulator formulations, but published results are still lacking.

The clinical implications of these findings are broad. For aesthetic dentistry, the adoption of anti-aging principles enables the provision of more comprehensive treatments that not only correct localized imperfections but also promote global and long-lasting rejuvenation. The combination of HA, biostimulators, and adjuvant therapies represents a therapeutic arsenal capable of meeting the growing demand for less invasive and long-lasting esthetic procedures. Furthermore, the application of biomaterials with regenerative properties in periodontics and implantology expands the clinical scope of this approach, integrating esthetics and tissue health within the same therapeutic plan [10,12,14].

Despite this promising scenario, it is important to emphasize that consolidating this integration requires greater production of multicenter, randomized clinical trials with extended follow-up. It is also necessary to develop specific clinical guidelines for aesthetic dentistry, including safety protocols, patient selection criteria, and complication monitoring. Only through such standardization will it be possible to transform current findings into strong clinical practice recommendations.

Thus, the discussion of results shows that integrating anti-aging medicine into aesthetic dentistry should not be understood merely as a technical advance, but as a paradigm shift in which orofacial care transcends esthetics and incorporates the principles of regeneration, functionality, and longevity promotion. This approach broadens the role of dentistry within the interdisciplinary context of health, positioning it as a key player in meeting the demands of a population increasingly interested in aging with preserved health, esthetics, and quality of life.

CONCLUSION

This integrative review demonstrated that the integration of anti-aging medicine into aesthetic dentistry and orofacial harmonization constitutes an innovative approach, supported by clinical and laboratory evidence that highlights its regenerative and esthetic potential. Interventions with hyaluronic acid, collagen biostimulators, and adjuvant therapies such as PRGF and ozone showed consistent results in improving tissue volume, firmness, elasticity, and healing, providing benefits that extend beyond immediate esthetics and encompass functional and psychological dimensions.

The findings reinforce that adopting these resources not only meets the growing social demand for facial rejuvenation but also contributes to the promotion of oral health and quality of life, consolidating dentistry as a strategic area within the interdisciplinary field of aesthetic medicine. However, methodological limitations still persist, such as small sample sizes, protocol heterogeneity, and the scarcity of long-term clinical trials, which limit the robustness of conclusions and the possibility of meta-analyses with greater statistical power.

Therefore, future research should be conducted with more robust, multicenter, and standardized designs in order to consolidate safe and effective protocols that can guide clinical practice. The integration of anti-aging medicine into aesthetic dentistry should be understood not merely as a trend, but as an opportunity to transform orofacial care by combining science, esthetics, and tissue regeneration in a patient-centered approach focused on healthy longevity.

REFERENCES

1. Bal A, Koca Ü, Çanakçi CF, Yalçınkaya SE, Yalçınkaya A. The effect of hyaluronic acid and plasma rich in growth factors combination on interdental papilla reconstruction: randomized controlled clinical trial. Clin Oral Investig. 2023;27(7):4047-58. doi:10.1007/s00784-023-04986-9.
2. Nobre MM, Soares PB, Nobre RM, Moura CC, Zanetta-Barbosa D, Soares CJ. Physicochemical characteristics of calcium hydroxyapatite-based dermal fillers: a comparative study. Clin Cosmet Investig Dermatol. 2025;18:123-32. doi:10.2147/CCID.S415272.

3. Maci M, Wolf G, Hadeler E, Luthardt RG, Rudolph H. Systematic review on the use of botulinum toxin type A (BoNT-A) and hyaluronic acid (HA) in dentistry. J Esthet Restor Dent. 2024;36(6):451-63. doi:10.1111/jerd.13282.
4. Bravo BSF, Magalhães LQ, Pimentel L, et al. Evaluation of poly-L-lactic acid (Rennova Elleva®) for facial rejuvenation: prospective clinical study. J Cosmet Dermatol. 2024;23(2):678-86. doi:10.1111/jocd.16011.
5. JCM Júnior, Almeida NV, Santos T, et al. Biostimulators in orofacial harmonization: a narrative review. Rev Odontol Bras Central. 2023;32(89):45-53.
6. Naka CH, Sousa RS, Pereira AT, et al. Advances in collagen biostimulators for facial rejuvenation: a narrative review. J Clin Aesthet Dermatol. 2024;17(5):22-30.
7. Ianhez M, Rocha R, Silveira CA, et al. Complications associated with the use of facial biostimulators: a cross-sectional study. Aesthet Plast Surg. 2024;48(3):765-73. doi:10.1007/s00266-023-03112-7.
8. Fisher SM, Gomes RS, Oliveira TR, et al. Biostimulators as adjuncts in facial aesthetics: a narrative review. Dermatol Ther. 2024;37(8):e16743. doi:10.1111/dth.16743.
9. Rosa A, Vieira LM, Costa MR, et al. Effects of hyaluronic acid combined with ozone therapy in facial aesthetics: clinical trial. Lasers Med Sci. 2024;39(2):551-9. doi:10.1007/s10103-023-03841-1.
10. Atagün ÖS, Gümüş P, Nizam N, et al. Hyaluronic acid containing membrane improves periodontal wound healing: a randomized controlled clinical trial. Clin Oral Investig. 2025;29(1):213-25. doi:10.1007/s00784-024-05429-5.
11. Alkhatib MN, Rawlinson A, O'Rourke N, et al. Adjunctive use of hyaluronic acid in dermabrasion for facial scars: randomized clinical trial. J Plast Reconstr Aesthet Surg. 2025;78(1):56-64. doi:10.1016/j.bjps.2024.09.013.
12. López-Valverde N, García-Sánchez A, Ramírez JM, et al. The role of hyaluronic acid in peri-implant therapy: a narrative review. Int J Dent Hyg. 2025;23(1):87-95. doi:10.1111/idh.12650.
13. Alhashmi R, Al-Mutairi G, Al-Otaibi H, et al. Hyaluronic acid applications in dentistry: a systematic review. BMC Oral Health. 2025;25(1):112. doi:10.1186/s12903-025-04051-y.
14. Olszewska-Czyz I, Chrusciel-Nogalska M, Mierzwinska-Nastalska E, et al. Hyaluronic acid as an adjunctive to non-surgical periodontal therapy: randomized clinical trial. Clin Oral Investig. 2021;25(12):6511-20. doi:10.1007/s00784-021-04142-9.
15. Santos AR, Barros TP, Oliveira L, et al. Tissue integration of collagen biostimulators: an integrative review. Rev Assoc Paul Cir Dent. 2023;77(3):210-8.
16. Costa R, Almeida A, Gomes F, et al. Semi-permanent collagen biostimulators in facial rejuvenation: a narrative review. Rev Bras Cir Plást. 2022;37(4):512-20.
17. ClinicalTrials.gov. Pan-facial layering of hyaluronic acid fillers: an interventional clinical trial. Identifier NCT07063511. 2023.

18. ClinicalTrials.gov. Midface rejuvenation with new filler formulations: interventional clinical trial. Identifier NCT05963204. 2023.
19. Silva J, Mendes P, Rocha G, et al. Clinical outcomes of orofacial harmonization procedures: systematic review. J Esthet Restor Dent. 2025;37(2):201-12. doi:10.1111/jerd.13520.
20. Oliveira F, Cunha T, Matos L, et al. Orofacial harmonization: state of the art and future perspectives. Rev Bras Odontol Estética. 2023;21(56):98-107.