Recent advances in the prevention and treatment of dental erosion: a narrative review

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Abstract

Dental erosion is a progressive and irreversible loss of dental tissues caused by chemical processes from intrinsic or extrinsic acids without bacterial involvement. This condition, categorized as part of tooth wear, has gained increasing attention due to its rising prevalence, particularly among children and adolescents. Teeth erosion is often linked to modern dietary habits, including consuming acidic foods, beverages, and certain medications. The impact of dental erosion varies, from localized damage to the entire dentition, with factors such as acid exposure, pH, and the type of acid contributing to its severity. Prevention strategies focus on oral health education, dietary modifications, and remineralization with fluoride-based products, while emerging biomimetic technologies, such as nanomaterials and bioactive polymers, show promise. Restorative treatments, including composite restorations and veneers, are used for advanced cases but lack standardized guidelines for optimal application. Thirty-four studies were included in this article, focusing on fluoride-based products, innovative varnishes, and minimally invasive restorative techniques like CAD-CAM and injection molding. The review highlights the need for further research on the long-term effectiveness of these interventions and the development of standardized clinical guidelines to improve treatment outcomes.

Keywords: Dental enamel, Tooth erosion, Demineralization, Erosive tooth wea, Remineralization, Preventive therapy, Conservative therapy

Introduction

Dental erosion represents the progressive and irreversible loss of dental tissues due to chemical processes involving extrinsic or intrinsic acids without bacterial involvement

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How to Cite
L. Memè, P. Nardelli, S. Chieppa,M. Del Vecchio, F. Cardarelli, N. Sguera, F. Bambini, I.R. Bordea, E. Qorri, L. Almasri, M. Alkassab, M. Almasri, A. Palermo.
Recent advances in the prevention and treatment of dental erosion: a narrative review.
Oral and Implantology
Vol. 16 No. 3 (S1) (2024), 261-272.
https://doi.org/10.11138/oi.v16i3 (S1).78

(1–5). This condition is categorized under the broader phenomenon of tooth wear, which includes erosion, attrition, and abrasion, as defined by the International Association for Dental Research and the European Organisation for Caries Research. Within this context, “erosive tooth wear” (ETW) refers to tooth wear primarily driven by dental erosion. Historically, dental erosion has received limited clinical and scientific attention. However, its increasing prevalence, particularly among children and adolescents, has spurred interest across multiple health disciplines (6–11).

Recent studies highlight the growing impact of dental erosion, with a European survey reporting that 29% of young adults (aged 18–35 years) exhibited signs of dental erosion, and 3% showed severe manifestations (12–16). Both children and adults are affected, and the extent of the damage may range from localized defects to the involvement of the entire dentition (17–22). The etiology is closely tied to modern dietary habits, with an increased consumption of acidic foods and beverages identified as a significant risk factor (23–29). Acids contributing to erosion may have intrinsic origins, such as gastric acid from conditions like gastroesophageal reflux disease (GERD), chronic vomiting, and eating disorders, or extrinsic origins, including acidic foods, beverages, and certain medications (30–37). Intrinsic acids, such as hydrochloric acid from the stomach, are particularly corrosive due to their low pH. In contrast, extrinsic acids come from citrus fruits, carbonated drinks, and acid-containing drugs such as aspirin or vitamin C(38–42). When linked to eating disorders, the progression of erosion tends to be more rapid and severe (43–47).

Multiple factors, including the type, concentration, temperature, and duration of acid exposure, influence dental erosion’s severity. Additional elements such as pH, titratable acidity, ion concentration, and the frequency and method of exposure further modulate the erosive potential (48–52). The process begins with demineralizing and softening the enamel surface, which can lose up to 3 µm of material during the initial stages. Over time, this softened layer is entirely removed, exposing deeper enamel and, potentially, dentin. Structural vulnerabilities, such as defects in hydroxyapatite (HA) crystals and the high solubility of enamel at the amino-cement junction, exacerbate the damage (53–56) (Figure 1).

Addressing dental erosion requires a comprehensive approach that combines prevention and treatment. Prevention focuses on oral health education, dietary modifications, and remineralizing agents such as fluoride-based toothpaste and mouthwashes. Emerging biomimetic technologies, including nanomaterials and bioactive polymers, show promise in enhancing remineralization and erosion resistance. Despite the availability of various preventive products, a universally effective protocol has yet to be established (57–61).

In advanced cases, restorative treatments become necessary (62–66). Direct composite restorations and composite or ceramic veneers are commonly used to reconstruct or cover eroded surfaces. However, clinicians often face challenges in selecting the optimal treatment due to the lack of standardized guidelines (67–71).

This article explores current and emerging solutions for managing dental erosion, emphasizing preventive and therapeutic strategies (72–78). Preventive measures seek to limit erosion progression and preserve dental integrity, while restorative treatments focus on the conservative rehabilitation of affected teeth, aiming to restore their anatomy and function (79–85).

Materials and Method

The keywords ‘dental erosion’ and (‘therapy’ OR ‘treatment’) were applied for the search, which targeted publications in Scopus, Web of Science, and PubMed databases, restricted to articles in English.

The article focused on studies involving human participants, specifically clinical research and case reports.

The titles and abstracts of the retrieved studies were screened, and irrelevant articles were excluded. The remaining studies were then reviewed in full. Any discrepancies between reviewers were resolved through collaborative discussion to ensure consensus.

Reviewers carried out a comprehensive analysis, rating all qualifying records according to the subsequent inclusion standards: (1) randomized control trials (RCTs), randomized controlled clinical trials (RCCTs), comparative studies, retrospective studies; (2) human participant studies; (3) full-text articles available for free; and (4) English-language publications. The following exclusion criteria were determined: (1) in vitro articles, (2) animal-related studies, and (3) articles not released in English.

Figure 1. Dental erosion

Results

A total of 391 studies were identified through searches in PubMed (107), Web of Science (139), and Scopus (145). After removing 181 duplicates, 210 articles underwent title and abstract screening, with 96 excluded due to irrelevance. Of the remaining 114 articles, 10 were eliminated because the full text was unavailable. Following an in-depth review of 104 articles, 5 were excluded for focusing on erosion causes rather than treatment, 37 were off-topic, 25 used animal substrates (bovine enamel), and 3 were disqualified due to inappropriate settings. Ultimately, 34 studies were included in the review.

Discussion

Dental erosion is an increasingly studied issue in modern dentistry, leading to extensive research on preventive and therapeutic solutions(86–91). Preventive measures primarily minimize risk through innovative varnishes and toothpaste (TP) formulations containing state-of-the-art solutions (92–99). Studies have shown that fluoride-based products protect enamel from erosive damage, such as fluoride varnish and fluoride-enriched TP. For example, fluoride-containing TP has demonstrated greater efficacy than fluoride-free options in mitigating erosion caused by acidic beverages like orange soda or Pepsi. Similarly, varnish research indicates that formulations containing casein phosphopeptide-amorphous calcium phosphate (CPP-ACP) or NanoF are effective in enamel remineralization and wear prevention (100–104).

Specific studies underline the potential of compounds like stannous fluoride (SnF2), nano-hydroxyapatite (NHA), and sugarcane cystatin (CaneCPI-5) in forming protective layers against acid attacks. Notably, formulations like sodium fluoride (NaF)/CL TPs, which control pH and enhance fluoride absorption, offer heightened resistance to acid erosion(105–109). Desensitizing TP, including those with casein phosphopeptide (CPP) and polyvinyl methyl ether/maleic acid copolymers (PVM/MA), has also shown promise in occluding dentinal tubules, mitigating erosive damage. Other formulations, such as anti-erosion mousse and controlled fluoride-release TP, have exhibited similar preventive benefits (110–116).

Varnish therapy adds an essential dimension to preventive strategies. Studies highlight the effectiveness of fluoride varnishes and calcium mesoporous silica nanoparticles in resisting acidic challenges. Moreover, combining fluoride with innovative materials like titanium tetrafluoride (TiF4) or CO2 and erbium-chromium lasers has improved enamel resistance. For example, laser irradiation before fluoride application enhances enamel microhardness, protecting against acid erosion (117–125).

Therapeutic approaches to dental erosion often depend on the extent of damage and patient needs. Early intervention using minimally invasive methods is emphasized, with restorative composites being a standard solution (126–130). Composite restorations are valued for their aesthetics, affordability, and simple maintenance. Techniques like the injection molding of composite resins allow for efficient restoration in a single session, restoring eroded teeth' original shape and size. However, composites may discolor over time or require repairs due to partial fractures (131–140).

Prosthetic options, including crowns and veneers, provide durable alternatives for more severe cases (141–146, 302). Veneers, especially minimally invasive ones, preserve tooth structure while offering aesthetic and functional benefits (147–151). The "sandwich technique," involving a combination of vestibular and palatal veneers, and "V-shaped veneers" are innovative options that cater to specific cases (152–155). For teeth affected by gastro-oesophageal reflux, high-viscosity glass ionomer cement has shown effective long-term results, reducing pain and restoring tooth anatomy (156–160).

Advancements in CAD-CAM technology have enhanced restorative precision, enabling the fabrication of ultra-thin veneers in ceramic or composite materials. Clinical studies show comparable survival rates and functional outcomes between these materials, although composites may exhibit slightly increased surface roughness over time (161–178). Full-mouth rehabilitation, including direct composites, onlays, and veneers, has demonstrated high survival rates over six years, proving their efficacy in addressing severe dental wear (179–183).

Innovative digital workflows are also gaining traction, allowing clinicians to create virtual models of affected teeth. These models facilitate customized prosthetics design and 3D printing while preserving maximum tooth structure (184–189). Stereolithographic templates ensure accurate preparation, improving treatment outcomes (190–195).

Despite these advancements, the reviewed studies highlight certain limitations. Many preventive strategies rely on in vitro data, necessitating further validation through in vivo research(196–201). Additionally, the lack of comprehensive discussions on epidemiology, risk factors, and diagnostic aspects limits the scope of current findings (202–207). Critical assessments of study quality and conflicts of interest are also needed to strengthen conclusions (208–218).

In summary, while fluoride remains a cornerstone in prevention and treatment, innovations in materials and techniques are expanding the options available for managing dental erosion (219–226). From protective varnishes and advanced TPs to minimally invasive restorative and prosthetic solutions, modern dentistry is moving towards personalized, conservative approaches (227–235). Future research should focus on validating in vitro findings, exploring epidemiological factors, and refining therapeutic strategies to improve patient outcomes(236–242).

Conclusions

Dental erosion is a prevalent issue that challenges dentists, requiring effective prevention and treatment strategies. Preventive measures are crucial to minimize erosion and halt its progression(243–249). Research emphasizes topical solutions like varnishes, gels, mousses, and toothpaste (TP) as practical tools against erosive processes, with fluoride remaining the gold standard for remineralization (250–256). However, innovative formulations are being explored to enhance preventive efficacy (257–263).

When erosion leads to significant loss of tooth structure, impairing function, aesthetics, and anatomy, restorative therapies become necessary (264–269). These treatments address sensitivity, pain, and cosmetic

concerns. Restorative options include direct composite restorations, prosthetic crowns, veneers, and minimally invasive techniques like injection molding or CAD-CAM systems (270–276).

Despite advances, gaps remain in understanding newer materials and approaches' long-term effectiveness and reliability. Research is needed to evaluate the durability of fluoride-based treatments and alternative strategies in children and adults (277–286). Comprehensive, longitudinal studies can help establish standardized clinical guidelines for managing dental erosion(287–292). These guidelines would aid clinicians in determining when to prioritize prevention and when to implement therapeutic interventions, ultimately improving patient outcomes and fostering more informed decision-making in dental practice (293–301).

Abbreviations:

CPP:	Casein Phosphopeptide
CPP-ACP:	Casein Phosphopeptide-Amorphous Calcium Phosphate
ETW:	Erosive Tooth Wear
GERD:	Gastroesophageal Reflux Disease
HA:	Hydroxyapatite
NaF:	Sodium Fluoride
NHA:	Nano-Hydroxyapatite
RCT:	Randomized Clinical Trial
PVM/MA:	Polyvinyl Methyl Ether/Maleic Acid Copolymers
SnF2/SnCl2:	Stannous Fluoride
TiF4:	Titanium Tetrafluoride
TP:	Toothpaste

Funding

This research received no external funding.

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

Data Availability Statement

Not applicable.

Conflicts of Interest

The authors declare no conflict of interest.

References

1. Dallari G, Scalzo I, Rosati RM, Sampaio CS, Hirata R. Full-mouth adhesive rehabilitation of a severe case of erosion treated with v-shaped veneers. Journal of Esthetic and Restorative Dentistry. 2021 Apr 18;33(3):422–31.
2. Torosyan A, Vailati F, Mojon P, Sierra D, Sailer I. Retrospective Clinical Study of Minimally Invasive Full-Mouth Rehabilitations of Patients with Erosions and/or Abrasions Following the 3-Step Technique. Part 1: 6-year Survival Rates and Technical Outcomes of the Restorations. Int J Prosthodont. 2022 Mar;35(2):139–51.
3. Oudkerk J, Eldafrawy M, Bekaert S, Grenade C, Vanheusden A, Mainjot A. The one-step no-prep approach for full-mouth rehabilitation of worn dentition using PICN CAD-CAM restorations: 2-yr results of a prospective clinical study. J Dent. 2020 Jan;92:103245.
4. Carvalho TS, Colon P, Ganss C, Huysmans MC, Lussi A, Schlueter N, et al. Consensus Report of the European Federation of Conservative Dentistry: Erosive tooth wear: diagnosis and management. Swiss Dent J. 2016;126(4):342–6.
5. Tauböck TT, Schmidlin PR, Attin T. Vertical Bite Rehabilitation of Severely Worn Dentitions with Direct Composite Restorations: Clinical Performance up to 11 Years. J Clin Med. 2021 Apr 16;10(8).
6. Bartlett DW, Fares J, Shirodaria S, Chiu K, Ahmad N, Sherriff M. The association of tooth wear, diet, and dietary habits in adults aged 18–30 years old. J Dent. 2011 Dec;39(12):811–6.
7. Ramos R, Coelho N, Lopes G. Three-year Follow-up of Conservative Direct Composite Veneers on Eroded Teeth. Oper Dent. 2022 Mar 1;47(2):131–7.
8. Schlichting LH, Resende TH, Reis KR, Raybolt dos Santos A, Correa IC, Magne P. Ultrathin CAD-CAM glass-ceramic and composite resin occlusal veneers for the treatment of severe dental erosion: An up to 3-year randomized clinical trial. J Prosthet Dent. 2022 Aug;128(2):158.e1-158.e12.
9. Pelá VT, Niemeyer SH, Baumann T, Levy FM, Henrique-Silva F, Lussi A, et al. Acquired Pellicle Engineering Using a Combination of Organic (Sugarcane Cystatin) and Inorganic (Sodium Fluoride) Components against Dental Erosion. Caries Res. 2022;56(2):138–45.
10. Rapone B, Inchingolo AD, Trasarti S, Ferrara E, Qorri E, Mancini A, et al. Long-Term Outcomes of Implants Placed in Maxillary Sinus Floor Augmentation with Porous Fluorohydroxyapatite (Algipore® FRIOS®) in Comparison with Anorganic Bovine Bone (Bio-Oss®) and Platelet Rich Plasma (PRP): A Retrospective Study. J Clin Med. 2022 Apr 28;11(9).
11. Bavetta G, Bavetta G, Randazzo V, Cavataio A, Paderni C, Grassia V, et al. A Retrospective Study on Insertion Torque and Implant Stability Quotient (ISQ) as Stability Parameters for Immediate Loading of Implants in Fresh Extraction Sockets. Biomed Res Int. 2019;2019:9720419.
12. Otel I, Dias K, Pereira R, Fonseca M, Jesus AP, Mata A, et al. Investigation of the protective suitability of a dental fluorinated varnish by means of X Ray fluorescence and Raman spectroscopy. Journal of Trace Elements in Medicine and Biology. 2022 May;71:126938.
13. Moser C, Baumann T, Lussi A, Carvalho TS. Is the Erosion-Protective Effect Still Maintained when Tin Concentrations Are Reduced in Mouth Rinse Solutions? Caries Res. 2021;55(2):108–13.
14. Canto FMT, Alexandria AK, Justino IBDS, Rocha GM, Cabral LM, Ferreira R da S, et al. The use of a new calcium mesoporous silica nanoparticle versus calcium and/or fluoride products in reducing the progression of dental erosion. J Appl Oral Sci. 2020;28:e20200131.
15. Grohe B, Mittler S. Advanced non-fluoride approaches to dental enamel remineralization: The next level in enamel repair management. Biomaterials and biosystems. 2021 Dec;4:100029.
16. Meme' L, Gallusi G, Coli G, Strappa E, Bambini F, Sampalmieri F. Photobiomodulation to Reduce Orthodontic Treatment Time in Adults: A Historical Prospective Study. Applied Sciences. 2022 Nov 13;12(22):11532.
17. Maspero C, Farronato G, Giannini L, Kairyte L, Pisani L, Galbiati G. The complication of oral piercing and the role of dentist in their prevention: a literature review. Stomatologija. 2014;16(3):118–24.
18. Farronato M, Lucchina AG, Mortellaro C, Fama A, Galbiati G, Farronato G, et al. Bilateral Hyperplasia of the Coronoid Process in Pediatric Patients: What is the Gold Standard for Treatment? J Craniofac Surg. 2019 Jun;30(4):1058–63.
19. Farronato M, Lanteri V, Fama A, Maspero C. Correlation between Malocclusion and Allergic Rhinitis in Pediatric Patients: A Systematic Review. Children (Basel). 2020 Nov 27;7(12).
20. Farronato M, Begnoni G, Boodt L De, Thevissen P, Willems G, Cadenas de Llano-Pérula M. Are palatal rugae reliable markers for 3D superimposition and forensic human identification after palatal expansion? A systematic review. Forensic Sci Int. 2023 Oct;351:111814.

Method: A Systematic Review. Turk J Orthod. 2022 Mar;35(1):55–66.
22. Caggiano M, Gasparro R, D'Ambrosio F, Pisano M, Di Palo MP, Contaldo M. Smoking Cessation on Periodontal and Peri-Implant Health Status: A Systematic Review. Dent J (Basel). 2022 Aug 31;10(9).
23. Ciavarella D, Parziale V, Mastrovincenzo M, Palazzo A, Sabatucci A, Suriano MM, et al. Condylar position indicator and T-scan system II in clinical evaluation of temporomandibular intracapsular disease. J Craniomaxillofac Surg. 2012 Jul;40(5):449–55.
24. Ciavarella D, Tepedino M, Gallo C, Montaruli G, Zhurakivska K, Coppola L, et al. Post-orthodontic position of lower incisors and gingival recession: A retrospective study. J Clin Exp Dent. 2017 Dec;9(12):e1425–30.
25. Scandurra C, Gasparro R, Dolce P, Bochicchio V, Muzii B, Sammartino G, et al. The role of cognitive and non-cognitive factors in dental anxiety: A mediation model. Eur J Oral Sci. 2021 Aug;129(4):e12793.
26. Piombino P, Marenzi G, Dell'Aversana Orabona G, Califano L, Sammartino G. Autologous fat grafting in facial volumetric restoration. J Craniofac Surg. 2015 May;26(3):756–9.
27. Ballini A, Cantore S, Signorini L, Saini R, Scacco S, Gnoni A, et al. Efficacy of Sea Salt-Based Mouthwash and Xylitol in Improving Oral Hygiene among Adolescent Population: A Pilot Study. Int J Environ Res Public Health. 2020 Dec 23;18(1).
28. Santacroce L, Di Cosola M, Bottalico L, Topi S, Charitos IA, Ballini A, et al. Focus on HPV Infection and the Molecular Mechanisms of Oral Carcinogenesis. Viruses. 2021 Mar 26;13(4).
29. Grassi FR, Ciccolella F, D'Apolito G, Papa F, Iuso A, Salzo AE, et al. Effect of low-level laser irradiation on osteoblast proliferation and bone formation. J Biol Regul Homeost Agents. 2011;25(4):603–14.
30. Minervini G, Franco R, Marrapodi MM, Crimi S, Badnjević A, Cervino G, et al. Correlation between Temporomandibular Disorders (TMD) and Posture Evaluated trough the Diagnostic Criteria for Temporomandibular Disorders (DC/TMD): A Systematic Review with Meta-Analysis. J Clin Med. 2023 Apr 2;12(7):2652.
31. Minervini G, Franco R, Marrapodi MM, Fiorillo L, Cervino G, Cicciù M. Prevalence of temporomandibular disorders (<scp>TMD</scp>) in pregnancy: A systematic review with meta-analysis. J Oral Rehabil. 2023 Jul 19;50(7):627–34.
32. Qamar Z, Alghamdi AMS, Haydarah NK Bin, Balateef AA, Alamoudi AA, Abumismar MA, et al. Impact of temporomandibular disorders on oral health-related quality of life: A systematic review and meta-analysis. J Oral Rehabil. 2023 Aug 3;50(8):706–14.
33. Sammartino G, Marenzi G, Colella G, Califano L, Grivetto F, Mortellaro C. Autogenous calvarial bone graft harvest: intraoperational complications. J Craniofac Surg. 2005 Mar;16(2):312–9.
34. Sammartino G, Marenzi G, Howard CM, Minimo C, Trosino O, Califano L, et al. Chondrosarcoma of the jaw: a closer look at its management. J Oral Maxillofac Surg. 2008 Nov;66(11):2349–55.
35. Sammartino G, Marenzi G, Tammaro L, Bolognese A, Calignano A, Costantino U, et al. Anti-inflammatory drug incorporation into polymeric nano-hybrids for local controlled release. Int J Immunopathol Pharmacol. 2005;18(3 Suppl):55–62.
36. Minervini G, Franco R, Marrapodi MM, Fiorillo L, Cervino G, Cicciù M. Economic inequalities and temporomandibular disorders: A systematic review with meta-analysis. J Oral Rehabil. 2023 Aug 18;50(8):715–23.
37. Minervini G, Franco R, Marrapodi MM, Ronsivalle V, Shapira I, Cicciù M. Prevalence of temporomandibular disorders in subjects affected by Parkinson disease: A systematic review and metanalysis. J Oral Rehabil. 2023 Sep 24;50(9):877–85.
38. Rossi R, Memè L, Strappa EM, Bambini F. Restoration of Severe Bone and Soft Tissue Atrophy by Means of a Xenogenic Bone Sheet (Flex Cortical Sheet): A Case Report. Applied Sciences. 2023 Jan 4;13(2):692.
39. Tosco V, Monterubbianesi R, Aranguren J, Memè L, Putignano A, Orsini G. Evaluation of the Efficacy of Different Irrigation Systems on the Removal of Root Canal Smear Layer: A Scanning Electron Microscopic Study. Applied Sciences. 2022 Dec 22;13(1):149.
40. Rathi S, Chaturvedi S, Abdullah S, Rajput G, Alqahtani NM, Chaturvedi M, et al. Clinical Trial to Assess Physiology and Activity of Masticatory Muscles of Complete Denture Wearer Following Vitamin D Intervention. Medicina (B Aires). 2023 Feb 20;59(2):410.
41. Memè L, Sartini D, Pozzi V, Emanuelli M, Strappa EM, Bittarello P, et al. Epithelial Biological Response to Machined Titanium vs. PVD Zirconium-Coated Titanium: An In Vitro Study. Materials (Basel). 2022 Oct 17;15(20).
42. Abate A, Cavagnetto D, Fama A, Maspero C, Farronato G. Relationship between Breastfeeding and Malocclusion: A Systematic Review of the Literature. Nutrients. 2020 Nov 30;12(12).
43. Gokkaya B, Ozbek N, Guler Z, Akman S, Sarac AS, Kargul B. Effect of a Single Application of CPP-ACPF Varnish on the Prevention of Erosive Tooth Wear: An AAS, AFM and SMH Study. Oral Health Prev Dent. 2020 Jul 4;18(2):311–8.
44. González-Aragón Pineda ÁE, Borges-Yáñez SA, Irigoyen-Camacho ME, Lussi A. Relationship between erosive tooth wear and beverage consumption among a group of schoolchildren in Mexico City. Clin Oral Investig. 2019 Feb;23(2):715–23.
45. Arafa A, Filfilan SS, Fansa HA. Erosive effect of beverages on surface hardness and ultra-structure of deciduous teeth enamel. Pediatric Dental Journal. 2022 Dec;32(3):186–92.
46. Manaswini YH, Uloopi KS, Vinay C, Chandrasekhar R, RojaRamya KS. Impact of Calcium Glycerophosphate-supplemented Carbonated Beverages in Reducing Mineral Loss from the Enamel Surface. Int J Clin Pediatr Dent. 2020;13(1):1–5.
47. Boenheim F. Zur Physiologie und Pathologie des zeitlichen Ablaufs der Eiweißverdauung im menschlichen Magen. Digestion. 1919;25(4–5):258–318.
48. de Carvalho ACG, de Souza TF, Liporoni PCS, Pizi ECG, Matuda LS de A, Catelan A. Effect of bleaching agents on hardness, surface roughness and color parameters of dental enamel. J Clin Exp Dent. 2020 Jul;12(7):e670–5.
49. Larsen MJ, Nyvad B. Enamel erosion by some soft drinks and orange juices relative to their pH, buffering effect and contents of calcium phosphate. Caries Res. 1999;33(1):81–7.
50. Mutahar M, Carpenter G, Bartlett D, German M, Moazzez R. The presence of acquired enamel pellicle changes acid-induced erosion from dissolution to a softening process. Sci Rep. 2017 Sep 7;7(1):10920.
51. Lagerlöf F, Dawes C. The volume of saliva in the mouth before and after swallowing. J Dent Res. 1984 May;63(5):618–21.
52. Chawhuaveang DD, Yu OY, Yin IX, Lam WYH, Mei ML, Chu CH. Acquired salivary pellicle and oral diseases: A literature review. J Dent Sci. 2021 Jan;16(1):523–9.
53. Iorgulescu G. Saliva between normal and pathological. Important factors in determining systemic and oral health. J Med Life. 2009;2(3):303–7.
54. Ghallab A. In vitro test systems and their limitations. EXCLI J. 2013;12:1024–6.
55. Maladkar SR, Yadav P, Muniraja ANA, Uchil GS, George L V, Augustine D, et al. Erosive Effect of Acidic Beverages and Dietary Preservatives on Extracted Human Teeth-An In Vitro Analysis. Eur J Dent. 2022 Oct;16(4):919–29.
56. Scarano A, Piattelli A, Polimeni A, Di Iorio D, Carinci F. Bacterial adhesion on commercially pure titanium and anatase-coated titanium healing screws: an in vivo human study. J Periodontol. 2010 Oct;81(10):1466–71.
57. Scarano A, Barros RRM, Iezzi G, Piattelli A, Novaes AB. Acellular Dermal Matrix Graft for Gingival Augmentation: A Preliminary Clinical, Histologic, and Ultrastructural Evaluation. J Periodontol. 2009 Feb;80(2):253–9.
58. Kumar N, Amin F, Hashem D, Khan S, Zaidi H, Rahman S, et al. Evaluating the pH of Various Commercially Available Beverages in Pakistan: Impact of Highly Acidic Beverages

on the Surface Hardness and Weight Loss of Human Teeth. Biomimetics. 2022 Jul 26;7(3):102.
59. Noble WH, Donovan TE, Geissberger M. Sports Drinks and Dental Erosion. J Calif Dent Assoc. 2011 Apr 1;39(4):233–8.
60. Nijakowski K, Zdrojewski J, Nowak M, Podgórski F, Surdacka A. Regular Physical Activity and Dental Erosion: A Systematic Review. Applied Sciences. 2022 Jan 21;12(3):1099.
61. Belmar da Costa M, Delgado AHS, Pinheiro de Melo T, Amorim T, Mano Azul A. Analysis of laboratory adhesion studies in eroded enamel and dentin: a scoping review. Biomater Investig Dent. 2021 Jan 1;8(1):24–38.
62. Porras-Garcia B, Ferrer-Garcia M, Serrano-Troncoso E, Carulla-Roig M, Soto-Usera P, Miquel-Nabau H, et al. AN-VR-BE. A Randomized Controlled Trial for Reducing Fear of Gaining Weight and Other Eating Disorder Symptoms in Anorexia Nervosa through Virtual Reality-Based Body Exposure. J Clin Med. 2021 Feb 10;10(4):682.
63. Gaudio S, Brooks SJ, Riva G. Nonvisual Multisensory Impairment of Body Perception in Anorexia Nervosa: A Systematic Review of Neuropsychological Studies. PLoS One. 2014 Oct 10;9(10):e110087.
64. Lo Muzio L, Lo Russo L, Massaccesi C, Rappelli G, Panzarella V, Di Fede O, et al. Eating disorders: a threat for women's health. Oral manifestations in a comprehensive overview. Minerva Stomatol. 2007 May;56(5):281–92.
65. Inchingolo AD, Patano A, Coloccia G, Ceci S, Inchingolo AM, Marinelli G, et al. Treatment of Class III Malocclusion and Anterior Crossbite with Aligners: A Case Report. Medicina (Kaunas). 2022 Apr 27;58(5).
66. Inchingolo F, Tatullo M, Marrelli M, Inchingolo AM, Tarullo A, Inchingolo AD, et al. Combined occlusal and pharmacological therapy in the treatment of temporo-mandibular disorders. Eur Rev Med Pharmacol Sci. 2011 Nov;15(11):1296–300.
67. Lo Russo L, Campisi G, Di Fede O, Di Liberto C, Panzarella V, Lo Muzio L. Oral manifestations of eating disorders: a critical review. Oral Dis. 2008 Sep 13;14(6):479–84.
68. Presskreischer R, Prado MA, Kuraner SE, Arusilor IM, Pike K. Eating disorders and oral health: a scoping review. J Eat Disord. 2023 Apr 4;11(1):55.
69. Mehta LK, Hegde A, Thomas A, Virdi MS. Acidogenic Potential of Packaged Fruit Juices and its Effect on Plaque and Salivary pH. Int J Clin Pediatr Dent. 2019;12(4):312–7.
70. Valena V, Young W. Dental Erosion Patterns from Intrinsic Acid Regurgitation and Vomiting. Aust Dent J. 2002 Jun 12;47(2):106–15.
71. Nijakowski K, Walerczyk-Sas A, Surdacka A. Regular Physical Activity as a Potential Risk Factor for Erosive Lesions in Adolescents. Int J Environ Res Public Health. 2020 Apr 26;17(9):3002.
72. Johansson AK, Omar R, Carlsson GE, Johansson A. Dental erosion and its growing importance in clinical practice: from past to present. Int J Dent. 2012;2012:632907.
73. Buzalaf MAR, Hannas AR, Kato MT. Saliva and dental erosion. J Appl Oral Sci. 2012;20(5):493–502.
74. Buzalaf MAR, Magalhães AC, Rios D. Prevention of erosive tooth wear: targeting nutritional and patient-related risks factors. Br Dent J. 2018 Mar 9;224(5):371–8.
75. Ludovichetti FS, Zambon G, Cimolai M, Gallo M, Signoriello AG, Pezzato L, et al. Efficacy of Two Toothpaste in Preventing Tooth Erosive Lesions Associated with Gastroesophageal Reflux Disease. Applied Sciences. 2022 Jan 19;12(3):1023.
76. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021 Mar 29;n71.
77. di Lauro AE, Valletta A, Aliberti A, Cangiano M, Dolce P, Sammartino G, et al. The Effectiveness of Autologous Platelet Concentrates in the Clinical and Radiographic Healing after Endodontic Surgery: A Systematic Review. Materials (Basel). 2023 Nov 16;16(22).
78. Campana MD, Aliberti A, Acerra A, Sammartino P, Dolce P, Sammartino G, et al. The Effectiveness and Safety of Autologous Platelet Concentrates as Hemostatic Agents after Tooth Extraction in Patients on Anticoagulant Therapy: A Systematic Review of Randomized, Controlled Trials. J Clin Med. 2023 Aug 17;12(16).
79. Altshuler BD, Dechow PC, Waller DA, Hardy BW. An investigation of the oral pathologies occurring in bulimia nervosa. International Journal of Eating Disorders. 1990 Mar;9(2):191–9.
80. Emodi-Perlman A, Yoffe T, Rosenberg N, Eli I, Alter Z, Winocur E. Prevalence of psychologic, dental, and temporomandibular signs and symptoms among chronic eating disorders patients: a comparative control study. J Orofac Pain. 2008;22(3):201–8.
81. Garrido-Martínez P, Domínguez-Gordillo A, Cerero-Lapiedra R, Burgueño-García M, Martínez-Ramírez MJ, Gómez-Candela C, et al. Oral and dental health status in patients with eating disorders in Madrid, Spain. Med Oral Patol Oral Cir Bucal. 2019 Sep 1;24(5):e595–602.
82. Giraudeau N, Camman P, Pourreyron L, Inquimbert C, Lefebvre P. The contribution of teledentistry in detecting tooth erosion in patients with eating disorders. Digit Health. 2021;7:20552076211019250.
83. Johansson A, Norring C, Unell L, Johansson A. Eating disorders and oral health: a matched case–control study. Eur J Oral Sci. 2012 Feb 20;120(1):61–8.
84. Gasparro R, Di Spirito F, Campana MD, Sammartino G, di Lauro AE. The Role of Autologous Platelet Concentrates as a Local Antibiotic Delivery System: A Systematic Scoping Review. Antibiotics (Basel). 2024 Sep 6;13(9).
85. Valente NA, Marchio V, Troiano G, Gasparro R, Balice P, Marenzi G, et al. Narrow-diameter versus standard-diameter implants placed in horizontally regenerated bone in the rehabilitation of partially and completely edentulous patients: A systematic review. Int J Oral Implantol (Berl). 2022 Mar 10;15(1):11–33.
86. Lifante-Oliva C, López-Jornet P, Camacho-Alonso F, Esteve-Salinas J. Study of oral changes in patients with eating disorders. Int J Dent Hyg. 2008 May 10;6(2):119–22.
87. Milosevic A, Brodie DA, Slade PD. Dental erosion, oral hygiene, and nutrition in eating disorders. International Journal of Eating Disorders. 1997 Mar;21(2):195–9.
88. Alexandria A, Valença AMG, Cabral LM, Maia LC. Comparative Effects of CPP-ACP and Xylitol F-Varnishes on the Reduction of Tooth Erosion and Its Progression. Braz Dent J. 2020;31(6):664–72.
89. Austin RS, Stenhagen KR, Hove LH, Tveit AB, Moazzez R V, Bartlett DW. The effect of single-application fluoride treatment on simulated gastric erosion and erosion-abrasion of enamel in vitro. Int J Prosthodont. 2014;27(5):425–6.
90. Bartlett D. A personal perspective and update on erosive tooth wear - 10 years on: Part 1 - Diagnosis and prevention. Br Dent J. 2016 Aug 12;221(3):115–9.
91. Bejoy BM, Sruthi MS, George L, Mathew J, Vineet RP, Joy A. Comparative Evaluation of Casein Phosphopeptide-Amorphous Calcium Phosphate-Fluoride Paste and Sodium Fluoride Mouthwash in the Prevention of Dental Erosion: An In Vitro Study. J Contemp Dent Pract. 2020 Mar 1;21(3):267–70.
92. Bradna P, Vrbova R, Fialova V, Housova D, Gojisova E. Formation of protective deposits by anti-erosive toothpastes-A microscopic study on enamel with artificial defects. Scanning. 2016 Sep;38(5):380–8.
93. Buzalaf MAR, Magalhães AC, Wiegand A. Alternatives to fluoride in the prevention and treatment of dental erosion. Monogr Oral Sci. 2014;25:244–52.
94. Comar LP, Cardoso C de AB, Charone S, Grizzo LT, Buzalaf MAR, Magalhães AC. TiF4 and NaF varnishes as anti-erosive agents on enamel and dentin erosion progression in vitro. J Appl Oral Sci. 2015;23(1):14–8.
95. Creeth JE, Kelly SA, Martinez-Mier EA, Hara AT, Bosma ML, Butler A, et al. Dose-response effect of fluoride dentifrice on remineralisation and further demineralisation of erosive lesions: A randomised in situ clinical study. J Dent. 2015 Jul;43(7):823–31.
96. Donovan T, Nguyen-Ngoc C, Abd Alraheam I, Irusa K. Contemporary diagnosis and management of dental erosion. J Esthet Restor Dent. 2021 Jan;33(1):78–87.

97. Barootchi S, Wang HL, Ravida A, Ben Amor F, Riccitiello F, Rengo C, et al. Ridge preservation techniques to avoid invasive bone reconstruction: A systematic review and meta-analysis: Naples Consensus Report Working Group C. Int J Oral Implantol (Berl). 2019;12(4):399–416.
98. Inchingolo AM, Inchingolo AD, Viapiano F, Ciocia AM, Ferrara I, Netti A, et al. Treatment Approaches to Molar Incisor Hypomineralization: A Systematic Review. J Clin Med. 2023 Nov 20;12(22).
99. Minervini G, Franco R, Marrapodi MM, Di Blasio M, Ronsivalle V, Cicciù M. Children oral health and parents education status: a cross sectional study. BMC Oral Health. 2023 Oct 24;23(1):787.
100. Ekambaram M, Mohd Said SNB, Yiu CKY. A Review of Enamel Remineralisation Potential of Calcium- and Phosphate-based Remineralisation Systems. Oral Health Prev Dent. 2017;15(5):415–20.
101. Fernando JR, Shen P, Sim CPC, Chen YY, Walker GD, Yuan Y, et al. Self-assembly of dental surface nanofilaments and remineralisation by SnF2 and CPP-ACP nanocomplexes. Sci Rep. 2019 Feb 4;9(1):1285.
102. Ionta FQ, Dos Santos NM, Mesquita IM, Dionísio EJ, Cruvinel T, Honório HM, et al. Is the dentifrice containing calcium silicate, sodium phosphate, and fluoride able to protect enamel against chemical mechanical wear? An in situ/ex vivo study. Clin Oral Investig. 2019 Oct;23(10):3713–20.
103. Goldoni R, Scolaro A, Boccalari E, Dolci C, Scarano A, Inchingolo F, et al. Malignancies and Biosensors: A Focus on Oral Cancer Detection through Salivary Biomarkers. Biosensors (Basel). 2021 Oct 15;11(10).
104. Inchingolo F, Tatullo M, Abenavoli FM, Marrelli M, Inchingolo AD, Corelli R, et al. Surgical treatment of depressed scar: a simple technique. Int J Med Sci. 2011;8(5):377–9.
105. Inchingolo AM, Inchingolo AD, Latini G, Garofoli G, Sardano R, De Leonardis N, et al. Caries prevention and treatment in early childhood: comparing strategies. A systematic review. Eur Rev Med Pharmacol Sci. 2023 Nov;27(22):11082–92.
106. Inchingolo F, Inchingolo AM, Malcangi G, De Leonardis N, Sardano R, Pezzolla C, et al. The Benefits of Probiotics on Oral Health: Systematic Review of the Literature. Pharmaceuticals (Basel). 2023 Sep 16;16(9).
107. Inchingolo AM, Inchingolo AD, Carpentiere V, Del Vecchio G, Ferrante L, Di Noia A, et al. Predictability of Dental Distalization with Clear Aligners: A Systematic Review. Bioengineering (Basel). 2023 Dec 4;10(12).
108. Dipalma G, Inchingolo AD, Inchingolo AM, Piras F, Carpentiere V, Garofoli G, et al. Artificial Intelligence and Its Clinical Applications in Orthodontics: A Systematic Review. Diagnostics (Basel). 2023 Dec 15;13(24).
109. Reiss R. (Risks and benefits of population screening for early detection of breast cancer). Harefuah. 1983 May 1;104(9):419–21.
110. João-Souza SH, Lussi A, Baumann T, Scaramucci T, Aranha ACC, Carvalho TS. Chemical and physical factors of desensitizing and/or anti-erosive toothpastes associated with lower erosive tooth wear. Sci Rep. 2017 Dec 20;7(1):17909.
111. Lussi A, Buzalaf MAR, Duangthip D, Anttonen V, Ganss C, João-Souza SH, et al. The use of fluoride for the prevention of dental erosion and erosive tooth wear in children and adolescents. Eur Arch Paediatr Dent. 2019 Dec;20(6):517–27.
112. Lussi A, Carvalho TS. The future of fluorides and other protective agents in erosion prevention. Caries Res. 2015;49 Suppl 1:18–29.
113. Machado AC, Bezerra SJC, João-Souza SH, Caetano TM, Russo LC, Carvalho TS, et al. Using fluoride mouthrinses before or after toothbrushing: effect on erosive tooth wear. Arch Oral Biol. 2019 Dec;108:104520.
114. Maden EA, Acar Ö, Altun C, Polat GG. The Effect of Casein Phosphopeptide-Amorf Calcium Phosphate and Acidulated Phosphate Fluoride Gel on Dental Erosion in Primary Teeth: An in Vitro Study. J Clin Pediatr Dent. 2017;41(4):275–9.
115. Esposito M, Buti J, Barausse C, Gasparro R, Sammartino G, Felice P. Short implants versus longer implants in vertically augmented atrophic mandibles: A systematic review of randomised controlled trials with a 5-year post-loading follow-up. Int J Oral Implantol (Berl). 2019;12(3):267–80.
116. Sammartino G, Gasparro R, Marenzi G, Trosino O, Mariniello M, Riccitiello F. Extraction of mandibular third molars: proposal of a new scale of difficulty. Br J Oral Maxillofac Surg. 2017 Nov;55(9):952–7.
117. Kanzow P, Wegehaupt FJ, Attin T, Wiegand A. Etiology and pathogenesis of dental erosion. Quintessence Int. 2016 Apr;47(4):275–8.
118. Panich M, Poolthong S. The effect of casein phosphopeptide-amorphous calcium phosphate and a cola soft drink on in vitro enamel hardness. J Am Dent Assoc. 2009 Apr;140(4):455–60.
119. Passos VF, Rodrigues LKA, Santiago SL. The effect of magnesium hydroxide-containing dentifrice using an extrinsic and intrinsic erosion cycling model. Arch Oral Biol. 2018 Feb;86:46–50.
120. Rallan M, Chaudhary S, Goswami M, Sinha A, Arora R, Kishor A. Effect of various remineralising agents on human eroded enamel of primary teeth. Eur Arch Paediatr Dent. 2013 Oct;14(5):313–8.
121. Ranjitkar S, Rodriguez JM, Kaidonis JA, Richards LC, Townsend GC, Bartlett DW. The effect of casein phosphopeptide-amorphous calcium phosphate on erosive enamel and dentine wear by toothbrush abrasion. J Dent. 2009 Apr;37(4):250–4.
122. Reema SD, Lahiri PK, Roy S Sen. Review of casein phosphopeptides-amorphous calcium phosphate. The Chinese journal of dental research. 2014;17(1):7–14.
123. Scarano A, Inchingolo F, Lorusso F. Environmental Disinfection of a Dental Clinic during the Covid-19 Pandemic: A Narrative Insight. Biomed Res Int. 2020;2020:8896812.
124. Inchingolo AD, Inchingolo AM, Bordea IR, Xhajanka E, Romeo DM, Romeo M, et al. The Effectiveness of Osseodensification Drilling Protocol for Implant Site Osteotomy: A Systematic Review of the Literature and Meta-Analysis. Materials (Basel). 2021 Feb 28;14(5).
125. Contaldo M, Itro A, Lajolo C, Gioco G, Inchingolo F, Serpico R. Overview on Osteoporosis, Periodontitis and Oral Dysbiosis: The Emerging Role of Oral Microbiota. Applied Sciences. 2020 Aug 29;10(17):6000.
126. Scandiffio P, Mantilla T, Amaral F, França F, Basting R, Turssi C. Anti-erosive effect of calcium carbonate suspensions. J Clin Exp Dent. 2018 Aug;10(8):e776–80.
127. Shellis RP, Featherstone JDB, Lussi A. Understanding the chemistry of dental erosion. Monogr Oral Sci. 2014;25:163–79.
128. Chan AS, Tran TTK, Hsu YH, Liu SYS, Kroon J. A systematic review of dietary acids and habits on dental erosion in adolescents. Int J Paediatr Dent. 2020 Nov;30(6):713–33.
129. Vargas-Ferreira F, Praetzel JR, Ardenghi TM. Prevalence of tooth erosion and associated factors in 11-14-year-old Brazilian schoolchildren. J Public Health Dent. 2011;71(1):6–12.
130. Imfeld T. Dental erosion. Definition, classification and links. Eur J Oral Sci. 1996 Apr;104(2 (Pt 2)):151–5.
131. Wang X, Lussi A. Assessment and management of dental erosion. Dent Clin North Am. 2010 Jul;54(3):565–78.
132. Papagianni CE, van der Meulen MJ, Naeije M, Lobbezoo F. Oral health-related quality of life in patients with tooth wear. J Oral Rehabil. 2013 Mar;40(3):185–90.
133. Hellwig E, Lussi A. Oral hygiene products, medications and drugs - hidden aetiological factors for dental erosion. Monogr Oral Sci. 2014;25:155–62.
134. Uhlen MM, Mulic A, Holme B, Tveit AB, Stenhagen KR. The Susceptibility to Dental Erosion Differs among Individuals. Caries Res. 2016;50(2):117–23.
135. Bartlett D, O'Toole S. Tooth wear and aging. Aust Dent J. 2019 Jun;64 Suppl 1:S59–62.
136. Salas MMS, Nascimento GG, Vargas-Ferreira F, Tarquinio SBC, Huysmans MCDNJM, Demarco FF. Diet influenced tooth erosion prevalence in children and adolescents: Results of a meta-analysis and meta-regression. J Dent. 2015 Aug;43(8):865–75.

137. Inchingolo AM, Patano A, Piras F, Ruvo E de, Ferrante L, Noia A Di, et al. Orthognathic Surgery and Relapse: A Systematic Review. Bioengineering (Basel). 2023 Sep 10;10(9).
138. Inchingolo F, Inchingolo AM, Avantario P, Settanni V, Fatone MC, Piras F, et al. The Effects of Periodontal Treatment on Rheumatoid Arthritis and of Anti-Rheumatic Drugs on Periodontitis: A Systematic Review. Int J Mol Sci. 2023 Dec 7;24(24).
139. Inchingolo F, Inchingolo AD, Palumbo I, Trilli I, Guglielmo M, Mancini A, et al. The Impact of Cesarean Section Delivery on Intestinal Microbiota: Mechanisms, Consequences, and Perspectives-A Systematic Review. Int J Mol Sci. 2024 Jan 15;25(2).
140. Caggiano M, Gasparro R, D'Ambrosio F, Pisano M, Di Palo MP, Contaldo M. Smoking Cessation on Periodontal and Peri-Implant Health Status: A Systematic Review. Dent J (Basel). 2022 Aug 31;10(9).
141. O'Sullivan E, Milosevic A, British Society of Paediatric Dentistry. UK National Clinical Guidelines in Paediatric Dentistry: diagnosis, prevention and management of dental erosion. Int J Paediatr Dent. 2008 Nov;18 Suppl 1:29–38.
142. Al-Dlaigan YH, Al-Meedania LA, Anil S. The influence of frequently consumed beverages and snacks on dental erosion among preschool children in Saudi Arabia. Nutr J. 2017 Dec 11;16(1):80.
143. Hasselkvist A, Johansson A, Johansson AK. A 4 year prospective longitudinal study of progression of dental erosion associated to lifestyle in 13-14 year-old Swedish adolescents. J Dent. 2016 Apr;47:55–62.
144. Inchingolo AD, Patano A, Coloccia G, Ceci S, Inchingolo AM, Marinelli G, et al. The Efficacy of a New AMCOP® Elastodontic Protocol for Orthodontic Interceptive Treatment: A Case Series and Literature Overview. Int J Environ Res Public Health. 2022 Jan 16;19(2).
145. Coloccia G, Inchingolo AD, Inchingolo AM, Malcangi G, Montenegro V, Patano A, et al. Effectiveness of Dental and Maxillary Transverse Changes in Tooth-Borne, Bone-Borne, and Hybrid Palatal Expansion through Cone-Beam Tomography: A Systematic Review of the Literature. Medicina (Kaunas). 2021 Mar 19;57(3).
146. Patano A, Cirulli N, Beretta M, Plantamura P, Inchingolo AD, Inchingolo AM, et al. Education Technology in Orthodontics and Paediatric Dentistry during the COVID-19 Pandemic: A Systematic Review. Int J Environ Res Public Health. 2021 Jun 4;18(11).
147. Mefford T, Landau R. Charge symmetry breaking in 500 MeV nucleon-trinucleon scattering. Phys Rev C Nucl Phys. 1995 Sep;52(3):1212–5.
148. Okunseri C, Okunseri E, Gonzalez C, Visotcky A, Szabo A. Erosive tooth wear and consumption of beverages among children in the United States. Caries Res. 2011;45(2):130–5.
149. Li H, Zou Y, Ding G. Dietary factors associated with dental erosion: a meta-analysis. PLoS One. 2012;7(8):e42626.
150. Moher D, Liberati A, Tetzlaff J, Altman DG, PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. PLoS Med. 2009 Jul 21;6(7):e1000097.
151. Age limits and adolescents. Paediatr Child Health. 2003 Nov;8(9):577–8.
152. Chevitarese AB, França Leite KL de, Marañón-Vásquez GA, Masterson D, Pithon M, Maia LC. What is the effectiveness of titanium tetrafluoride to prevent or treat dental caries and tooth erosion? A systematic review. Acta Odontol Scand. 2022 Aug;80(6):441–56.
153. Ortiz ADC, Fideles SOM, Pomini KT, Buchaim RL. Updates in association of gastroesophageal reflux disease and dental erosion: systematic review. Expert Rev Gastroenterol Hepatol. 2021 Sep;15(9):1037–46.
154. Picos A, Badea ME, Dumitrascu DL. Dental erosion in gastro-esophageal reflux disease. A systematic review. Clujul Med. 2018 Oct;91(4):387–90.
155. Picos AM, Picos A, Nicoara P, Craitoiu MM. Dental Erosion in a Partially Edentulous Patient with Gastroesophageal Reflux Disease: A Case Report. Clujul Med. 2014;87(4):284–7.
156. McHugh ML. Interrater reliability: the kappa statistic. Biochem Med (Zagreb). 2012;22(3):276–82.
157. Modesti PA, Reboldi G, Cappuccio FP, Agyemang C, Remuzzi G, Rapi S, et al. Panethnic Differences in Blood Pressure in Europe: A Systematic Review and Meta-Analysis. PLoS One. 2016;11(1):e0147601.
158. Suga USG, Terada RSS, Ubaldini ALM, Fujimaki M, Pascotto RC, Batilana AP, et al. Factors that drive dentists towards or away from dental caries preventive measures: systematic review and metasummary. PLoS One. 2014;9(10):e107831.
159. El Aidi H, Bronkhorst EM, Huysmans MCDNJM, Truin GJ. Multifactorial analysis of factors associated with the incidence and progression of erosive tooth wear. Caries Res. 2011;45(3):303–12.
160. Deery C, Wagner ML, Longbottom C, Simon R, Nugent ZJ. The prevalence of dental erosion in a United States and a United Kingdom sample of adolescents. Pediatr Dent. 2000;22(6):505–10.
161. Smith BG, Knight JK. An index for measuring the wear of teeth. Br Dent J. 1984 Jun 23;156(12):435–8.
162. Williams D, Croucher R, Marcenes W, O'Farrell M. The prevalence of dental erosion in the maxillary incisors of 14-year-old schoolchildren living in Tower Hamlets and Hackney, London, UK. Int Dent J. 1999 Aug;49(4):211–6.
163. Gurgel CV, Rios D, de Oliveira TM, Tessarolli V, Carvalho FP, Machado MA de AM. Risk factors for dental erosion in a group of 12- and 16-year-old Brazilian schoolchildren. Int J Paediatr Dent. 2011 Jan;21(1):50–7.
164. Inchingolo AD, Inchingolo AM, Malcangi G, Avantario P, Azzollini D, Buongiorno S, et al. Effects of Resveratrol, Curcumin and Quercetin Supplementation on Bone Metabolism-A Systematic Review. Nutrients. 2022 Aug 26;14(17).
165. Di Domenico M, Feola A, Ambrosio P, Pinto F, Galasso G, Zarrelli A, et al. Antioxidant Effect of Beer Polyphenols and Their Bioavailability in Dental-Derived Stem Cells (D-dSCs) and Human Intestinal Epithelial Lines (Caco-2) Cells. Stem Cells Int. 2020;2020:8835813.
166. Inchingolo AD, Dipalma G, Inchingolo AM, Malcangi G, Santacroce L, D'Oria MT, et al. The 15-Months Clinical Experience of SARS-CoV-2: A Literature Review of Therapies and Adjuvants. Antioxidants (Basel). 2021 May 31;10(6).
167. Inchingolo F, Tatullo M, Marrelli M, Inchingolo AD, Corelli R, Inchingolo AM, et al. Clinical case-study describing the use of skin-perichondrium-cartilage graft from the auricular concha to cover large defects of the nose. Head Face Med. 2012 Mar 19;8:10.
168. Santacroce L, Sardaro N, Topi S, Pettini F, Bottalico L, Cantore S, et al. The pivotal role of oral microbiota in health and disease. J Biol Regul Homeost Agents. 2020;34(2):733–7.
169. Inchingolo F, Tatullo M, Abenavoli FM, Marrelli M, Inchingolo AD, Corelli R, et al. Upper eyelid reconstruction: a short report of an eyelid defect following a thermal burn. Head Face Med. 2009 Nov 25;5:26.
170. Maspero C, Cappella A, Dolci C, Cagetti MG, Inchingolo F, Sforza C. Is Orthodontic Treatment with Microperforations Worth It? A Scoping Review. Children (Basel). 2022 Feb 6;9(2).
171. Farronato M, Farronato D, Inchingolo F, Grassi L, Lanteri V, Maspero C. Evaluation of Dental Surface after De-Bonding Orthodontic Bracket Bonded with a Novel Fluorescent Composite: In Vitro Comparative Study. Applied Sciences. 2021 Jul 9;11(14):6354.
172. Marinelli G, Inchingolo AD, Inchingolo AM, Malcangi G, Limongelli L, Montenegro V, et al. White spot lesions in orthodontics: prevention and treatment. A descriptive review. J Biol Regul Homeost Agents. 2021;35(2 Suppl. 1):227–40.
173. Ceratti C, Maspero C, Consonni D, Caprioglio A, Connelly ST, Inchingolo F, et al. Cone-Beam Computed Tomographic Assessment of the Mandibular Condylar Volume in Different Skeletal Patterns: A Retrospective Study in Adult Patients. Bioengineering (Basel). 2022 Mar 2;9(3).

174. Scarano A, Inchingolo F, Rapone B, Lucchina AG, Qorri E, Lorusso F. Role of Autologous Platelet Gel (APG) in Bone Healing: A Rabbit Study. Applied Sciences. 2021 Jan 4;11(1):395.
175. Lorusso F, Inchingolo F, Dipalma G, Postiglione F, Fulle S, Scarano A. Synthetic Scaffold/Dental Pulp Stem Cell (DPSC) Tissue Engineering Constructs for Bone Defect Treatment: An Animal Studies Literature Review. Int J Mol Sci. 2020 Dec 21;21(24).
176. Inchingolo F, Tatullo M, Abenavoli FM, Inchingolo AD, Inchingolo AM, Dipalma G. Fish-hook injuries: a risk for fishermen. Head Face Med. 2010 Dec 14;6(1):28.
177. Inchingolo AD, Inchingolo AM, Bordea IR, Malcangi G, Xhajanka E, Scarano A, et al. SARS-CoV-2 Disease through Viral Genomic and Receptor Implications: An Overview of Diagnostic and Immunology Breakthroughs. Microorganisms. 2021 Apr 10;9(4).
178. Romita P, Foti C, Calogiuri G, Cantore S, Ballini A, Dipalma G, et al. Contact dermatitis due to transdermal therapeutic systems: a clinical update. Acta Biomed. 2018 Oct 26;90(1):5–10.
179. Contaldo M, Boccellino M, Zannini G, Romano A, Sciarra A, Sacco A, et al. Sex Hormones and Inflammation Role in Oral Cancer Progression: A Molecular and Biological Point of View. J Oncol. 2020;2020:9587971.
180. Coscia MF, Monno R, Ballini A, Mirgaldi R, Dipalma G, Pettini F, et al. Human papilloma virus (HPV) genotypes prevalence in a region of South Italy (Apulia). Ann Ist Super Sanita. 2015;51(3):248–51.
181. Corriero A, Gadaleta RM, Puntillo F, Inchingolo F, Moschetta A, Brienza N. The central role of the gut in intensive care. Crit Care. 2022 Dec 7;26(1):379.
182. Laudadio C, Inchingolo AD, Malcangi G, Limongelli L, Marinelli G, Coloccia G, et al. Management of anterior open-bite in the deciduous, mixed and permanent dentition stage: a descriptive review. J Biol Regul Homeost Agents. 2021;35(2 Suppl. 1):271–81.
183. Montenegro V, Inchingolo AD, Malcangi G, Limongelli L, Marinelli G, Coloccia G, et al. Compliance of children with removable functional appliance with microchip integrated during covid-19 pandemic: a systematic review. J Biol Regul Homeost Agents. 2021;35(2 Suppl. 1):365–77.
184. Inchingolo AM, Patano A, Di Pede C, Inchingolo AD, Palmieri G, de Ruvo E, et al. Autologous Tooth Graft: Innovative Biomaterial for Bone Regeneration. Tooth Transformer® and the Role of Microbiota in Regenerative Dentistry. A Systematic Review. J Funct Biomater. 2023 Feb 27;14(3).
185. Inchingolo AM, Fatone MC, Malcangi G, Avantario P, Piras F, Patano A, et al. Modifiable Risk Factors of Non-Syndromic Orofacial Clefts: A Systematic Review. Children (Basel). 2022 Nov 28;9(12).
186. Maspero C, Abate A, Inchingolo F, Dolci C, Cagetti MG, Tartaglia GM. Incidental Finding in Pre-Orthodontic Treatment Radiographs of an Aural Foreign Body: A Case Report. Children (Basel). 2022 Mar 15;9(3).
187. Balzanelli MG, Distratis P, Catucci O, Cefalo A, Lazzaro R, Inchingolo F, et al. Mesenchymal Stem Cells: The Secret Children's Weapons against the SARS-CoV-2 Lethal Infection. Applied Sciences. 2021 Feb 14;11(4):1696.
188. Contaldo M, Luzzi V, Ierardo G, Raimondo E, Boccellino M, Ferati K, et al. Bisphosphonate-related osteonecrosis of the jaws and dental surgery procedures in children and young people with osteogenesis imperfecta: A systematic review. J Stomatol Oral Maxillofac Surg. 2020 Nov;121(5):556–62.
189. Scarano A, Khater AGA, Gehrke SA, Serra P, Francesco I, Di Carmine M, et al. Current Status of Peri-Implant Diseases: A Clinical Review for Evidence-Based Decision Making. J Funct Biomater. 2023 Apr 10;14(4).
190. Balzanelli MG, Distratis P, Dipalma G, Vimercati L, Inchingolo AD, Lazzaro R, et al. Sars-CoV-2 Virus Infection May Interfere CD34+ Hematopoietic Stem Cells and Megakaryocyte-Erythroid Progenitors Differentiation Contributing to Platelet Defection towards Insurgence of Thrombocytopenia and Thrombophilia. Microorganisms. 2021 Jul 30;9(8).
191. Inchingolo AM, Malcangi G, Ferrante L, Del Vecchio G, Viapiano F, Mancini A, et al. Damage from Carbonated Soft Drinks on Enamel: A Systematic Review. Nutrients. 2023 Apr 6;15(7).
192. d'Apuzzo F, Nucci L, Strangio BM, Inchingolo AD, Dipalma G, Minervini G, et al. Dento-Skeletal Class III Treatment with Mixed Anchored Palatal Expander: A Systematic Review. Applied Sciences. 2022 May 5;12(9):4646.
193. Inchingolo AD, Cazzolla AP, Di Cosola M, Greco Lucchina A, Santacroce L, Charitos IA, et al. The integumentary system and its microbiota between health and disease. J Biol Regul Homeost Agents. 2021;35(2 Suppl. 1):303–21.
194. Henderson AR, King J, Imrie CW. Anomalous response of macroamylase to assay temperature. Clin Chem. 1973 Jan;19(1):123–4.
195. Inchingolo AD, Di Cosola M, Inchingolo AM, Greco Lucchina A, Malcangi G, Pettini F, et al. Correlation between occlusal trauma and oral microbiota: a microbiological investigation. J Biol Regul Homeost Agents. 2021;35(2 Suppl. 1):295–302.
196. Dipalma G, Inchingolo AD, Inchingolo F, Charitos IA, Di Cosola M, Cazzolla AP. Focus on the cariogenic process: microbial and biochemical interactions with teeth and oral environment. J Biol Regul Homeost Agents. 2021;35(2).
197. Farì G, Megna M, Scacco S, Ranieri M, Raele MV, Chiaia Noya E, et al. Hemp Seed Oil in Association with β-Caryophyllene, Myrcene and Ginger Extract as a Nutraceutical Integration in Knee Osteoarthritis: A Double-Blind Prospective Case-Control Study. Medicina (Kaunas). 2023 Jan 18;59(2).
198. Inchingolo AM, Malcangi G, Costa S, Fatone MC, Avantario P, Campanelli M, et al. Tooth Complications after Orthodontic Miniscrews Insertion. Int J Environ Res Public Health. 2023 Jan 14;20(2).
199. Signorini L, Ballini A, Arrigoni R, De Leonardis F, Saini R, Cantore S, et al. Evaluation of a Nutraceutical Product with Probiotics, Vitamin D, Plus Banaba Leaf Extracts (Lagerstroemia speciosa) in Glycemic Control. Endocr Metab Immune Disord Drug Targets. 2021;21(7):1356–65.
200. Gandara BK, Truelove EL. Diagnosis and management of dental erosion. J Contemp Dent Pract. 1999 Nov 15;1(1):16–23.
201. Vartanian LR, Schwartz MB, Brownell KD. Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis. Am J Public Health. 2007 Apr;97(4):667–75.
202. Barron RP, Carmichael RP, Marcon MA, Sàndor GKB. Dental erosion in gastroesophageal reflux disease. J Can Dent Assoc. 2003 Feb;69(2):84–9.
203. Azzopardi A, Bartlett DW, Watson TF, Smith BG. A literature review of the techniques to measure tooth wear and erosion. Eur J Prosthodont Restor Dent. 2000 Sep;8(3):93–7.
204. Field J, Waterhouse P, German M. Quantifying and qualifying surface changes on dental hard tissues in vitro. J Dent. 2010 Mar;38(3):182–90.
205. Barbour ME, Rees JS. The laboratory assessment of enamel erosion: a review. J Dent. 2004 Nov;32(8):591–602.
206. Schlueter N, Hara A, Shellis RP, Ganss C. Methods for the measurement and characterization of erosion in enamel and dentine. Caries Res. 2011;45 Suppl 1:13–23.
207. Joshi N, Patil NP, Patil SB. The abrasive effect of a porcelain and a nickel-chromium alloy on the wear of human enamel and the influence of a carbonated beverage on the rate of wear. J Prosthodont. 2010 Apr;19(3):212–7.
208. Ganss C, Schlueter N, Hardt M, Schattenberg P, Klimek J. Effect of fluoride compounds on enamel erosion in vitro: a comparison of amine, sodium and stannous fluoride. Caries Res. 2008;42(1):2–7.
209. Ganss C, Hardt M, Lussi A, Cocks AK, Klimek J, Schlueter N. Mechanism of action of tin-containing fluoride solutions as anti-erosive agents in dentine - an in vitro tin-uptake, tissue loss, and scanning electron microscopy study. Eur J Oral Sci. 2010 Aug;118(4):376–84.
210. Fowler CE, Gracia L, Edwards MI, Willson R, Brown A, Rees GD. Inhibition of enamel erosion and promotion of

lesion rehardening by fluoride: a white light interferometry and microindentation study. J Clin Dent. 2009;20(6):178–85.
211. Jitpukdeebodintra S, Chuenarom C, Muttarak C, Khonsuphap P, Prasattakarn S. Effects of 1.23% acidulated phosphate fluoride gel and drinkable yogurt on human enamel erosion, in vitro. Quintessence Int. 2010;41(7):595–604.
212. Eisenburger M, Addy M, Hughes JA, Shellis RP. Effect of time on the remineralisation of enamel by synthetic saliva after citric acid erosion. Caries Res. 2001;35(3):211–5.
213. Willershausen B, Schulz-Dobrick B, Gleissner C. In vitro evaluation of enamel remineralisation by a casein phosphopeptide-amorphous calcium phosphate paste. Oral Health Prev Dent. 2009;7(1):13–21.
214. Azzopardi A, Bartlett DW, Watson TF, Sherriff M. The surface effects of erosion and abrasion on dentine with and without a protective layer. Br Dent J. 2004 Mar 27;196(6):351–4; discussion 339.
215. Cheng ZJ, Wang XM, Cui FZ, Ge J, Yan JX. The enamel softening and loss during early erosion studied by AFM, SEM and nanoindentation. Biomed Mater. 2009 Feb;4(1):015020.
216. Picos AM, Poenar S, Opris A, Chira A, Bud M, Berar A, et al. Prevalence of dental erosions in GERD: a pilot study. Clujul Med. 2013;86(4):344–6.
217. Colon P, Lussi A. Minimal intervention dentistry: part 5. Ultra-conservative approach to the treatment of erosive and abrasive lesions. Br Dent J. 2014 Apr;216(8):463–8.
218. Jaeggi T, Lussi A. Prevalence, incidence and distribution of erosion. Monogr Oral Sci. 2014;25:55–73.
219. Hannig M, Balz M. Influence of in vivo formed salivary pellicle on enamel erosion. Caries Res. 1999;33(5):372–9.
220. Cheung A, Zid Z, Hunt D, McIntyre J. The potential for dental plaque to protect against erosion using an in vivo-in vitro model--a pilot study. Aust Dent J. 2005 Dec;50(4):228–34.
221. Gracia LH, Rees GD, Brown A, Fowler CE. An in vitro evaluation of a novel high fluoride daily mouthrinse using a combination of microindentation, 3D profilometry and DSIMS. J Dent. 2010 Nov;38 Suppl 3:S12-20.
222. Ren YF, Zhao Q, Malmstrom H, Barnes V, Xu T. Assessing fluoride treatment and resistance of dental enamel to soft drink erosion in vitro: applications of focus variation 3D scanning microscopy and stylus profilometry. J Dent. 2009 Mar;37(3):167–76.
223. Paice EM, Vowles RW, West NX, Hooper SM. The erosive effects of saliva following chewing gum on enamel and dentine: an ex vivo study. Br Dent J. 2011 Feb 12;210(3):E3.
224. Rodriguez JM, Curtis R V, Bartlett DW. Surface roughness of impression materials and dental stones scanned by non-contacting laser profilometry. Dent Mater. 2009 Apr;25(4):500–5.
225. Sundaram G, Wilson R, Watson TF, Bartlett DW. Effect of resin coating on dentine compared to repeated topical applications of fluoride mouthwash after an abrasion and erosion wear regime. J Dent. 2007 Oct;35(10):814–8.
226. Azzopardi A, Bartlett DW, Watson TF, Sherriff M. The measurement and prevention of erosion and abrasion. J Dent. 2001 Aug;29(6):395–400.
227. Hooper S, West NX, Sharif N, Smith S, North M, De'Ath J, et al. A comparison of enamel erosion by a new sports drink compared to two proprietary products: a controlled, crossover study in situ. J Dent. 2004 Sep;32(7):541–5.
228. West NX, Hughes JA, Parker DM, Moohan M, Addy M. Development of low erosive carbonated fruit drinks 2. Evaluation of an experimental carbonated blackcurrant drink compared to a conventional carbonated drink. J Dent. 2003 Jul;31(5):361–5.
229. Bonazza V, Borsani E, Buffoli B, Parolini S, Inchingolo F, Rezzani R, et al. In vitro treatment with concentrated growth factors (CGF) and sodium orthosilicate positively affects cell renewal in three different human cell lines. Cell Biol Int. 2018 Mar;42(3):353–64.
230. Scarano A, Noumbissi S, Gupta S, Inchingolo F, Stilla P, Lorusso F. Scanning Electron Microscopy Analysis and Energy Dispersion X-ray Microanalysis to Evaluate the Effects of Decontamination Chemicals and Heat Sterilization on Implant Surgical Drills: Zirconia vs. Steel. Applied Sciences. 2019 Jul 16;9(14):2837.
231. Inchingolo F, Cantore S, Dipalma G, Georgakopoulos I, Almasri M, Gheno E, et al. Platelet rich fibrin in the management of medication-related osteonecrosis of the jaw: a clinical and histopathological evaluation. J Biol Regul Homeost Agents. 2017;31(3):811–6.
232. Cantore S, Ballini A, Farronato D, Malcangi G, Dipalma G, Assandri F, et al. Evaluation of an oral appliance in patients with mild to moderate obstructive sleep apnea syndrome intolerant to continuous positive airway pressure use: Preliminary results. Int J Immunopathol Pharmacol. 2016 Jun;29(2):267–73.
233. Malcangi G, Patano A, Morolla R, De Santis M, Piras F, Settanni V, et al. Analysis of Dental Enamel Remineralization: A Systematic Review of Technique Comparisons. Bioengineering (Basel). 2023 Apr 12;10(4).
234. Malcangi G, Patano A, Ciocia AM, Netti A, Viapiano F, Palumbo I, et al. Benefits of Natural Antioxidants on Oral Health. Antioxidants (Basel). 2023 Jun 20;12(6).
235. Inchingolo AM, Malcangi G, Ferrante L, Del Vecchio G, Viapiano F, Inchingolo AD, et al. Surface Coatings of Dental Implants: A Review. J Funct Biomater. 2023 May 22;14(5).
236. Balzanelli MG, Distratis P, Aityan SK, Amatulli F, Catucci O, Cefalo A, et al. An Alternative "Trojan Horse" Hypothesis for COVID-19: Immune Deficiency of IL-10 and SARS-CoV-2 Biology. Endocr Metab Immune Disord Drug Targets. 2022;22(1):1–5.
237. Arrigoni R, Ballini A, Santacroce L, Cantore S, Inchingolo A, Inchingolo F, et al. Another Look at Dietary Polyphenols: Challenges in Cancer Prevention and Treatment. Curr Med Chem. 2022;29(6):1061–82.
238. Ballini A, Di Benedetto A, De Vito D, Scarano A, Scacco S, Perillo L, et al. Stemness genes expression in naïve vs. osteodifferentiated human dental-derived stem cells. Eur Rev Med Pharmacol Sci. 2019 Apr;23(7):2916–23.
239. De Benedittis M, Petruzzi M, Pastore L, Inchingolo F, Serpico R. Nd:YAG laser for gingivectomy in Sturge-Weber syndrome. J Oral Maxillofac Surg. 2007 Feb;65(2):314–6.
240. Balzanelli MG, Distratis P, Lazzaro R, Pham VH, Tran TC, Dipalma G, et al. Analysis of Gene Single Nucleotide Polymorphisms in COVID-19 Disease Highlighting the Susceptibility and the Severity towards the Infection. Diagnostics (Basel). 2022 Nov 16;12(11).
241. Scarano A, Lorusso F, Inchingolo F, Postiglione F, Petrini M. The Effects of Erbium-Doped Yttrium Aluminum Garnet Laser (Er: YAG) Irradiation on Sandblasted and Acid-Etched (SLA) Titanium, an In Vitro Study. Materials. 2020 Sep 19;13(18):4174.
242. Borsani E, Buffoli B, Bonazza V, Brunelli G, Monini L, Inchingolo F, et al. In vitro effects of concentrated growth factors (CGF) on human SH-SY5Y neuronal cells. Eur Rev Med Pharmacol Sci. 2020 Jan;24(1):304–14.
243. Casu C, Mosaico G, Natoli V, Scarano A, Lorusso F, Inchingolo F. Microbiota of the Tongue and Systemic Connections: The Examination of the Tongue as an Integrated Approach in Oral Medicine. Hygiene. 2021 Jul 1;1(2):56–68.
244. Pacifici L, Santacroce L, Dipalma G, Haxhirexha K, Topi S, Cantore S, et al. Gender medicine: the impact of probiotics on male patients. Clin Ter. 2021;171(1):e8–15.
245. Inchingolo F, Paracchini L, DE Angelis F, Cielo A, Orefici A, Spitaleri D, et al. Biomechanical behaviour of a jawbone loaded with a prosthetic system supported by monophasic and biphasic implants. Oral Implantol (Rome). 2016;9(Suppl 1/2016 to N 4/2016):65–70.
246. Ballini A, Cantore S, Saini R, Pettini F, Fotopoulou EA, Saini SR, et al. Effect of activated charcoal probiotic toothpaste containing Lactobacillus paracasei and xylitol on dental caries: a randomized and controlled clinical trial. J Biol Regul Homeost Agents. 33(3):977–81.
247. Pasciuti E, Coloccia G, Inchingolo AD, Patano A, Ceci S, Bordea IR, et al. Deep Bite Treatment with Aligners: A New Protocol. Applied Sciences. 2022 Jul 2;12(13):6709.
248. Cirulli N, Ballini A, Cantore S, Farronato D, Inchingolo F, Dipalma G, et al. MIXED DENTITION SPACE ANALYSIS

OF A SOUTHERN ITALIAN POPULATION: NEW REGRESSION EQUATIONS FOR UNERUPTED TEETH. J Biol Regul Homeost Agents. 2015;29(2):515–20.
249. Vermesan D, Prejbeanu R, Poenaru D V, Petrescu H, Apostol E, Inchingolo F, et al. Do intramedullary implants improve survival in elderly patients with trochanteric fractures? A retrospective study. Clin Ter. 2015;166(3):e140-5.
250. Bambini F, Greci L, Memè L, Santarelli A, Carinci F, Pezzetti F, et al. Raloxifene covalently bonded to titanium implants by interfacing with (3-aminopropyl)-triethoxysilane affects osteoblast-like cell gene expression. Int J Immunopathol Pharmacol. 2006;19(4):905–14.
251. Bambini F, De Stefano CA, Giannetti L, Memè L, Pellecchia M. (Influence of biphosphonates on the integration process of endosseous implants evaluated using single photon emission computerized tomography (SPECT)). Minerva Stomatol. 2003 Jun;52(6):331–8.
252. Strappa EM, Memè L, Cerea M, Roy M, Bambini F. Custom-made additively manufactured subperiosteal implant. Minerva dental and oral science. 2022 Dec;71(6):353–60.
253. Giorgini E, Sabbatini S, Conti C, Rubini C, Rocchetti R, Fioroni M, et al. Fourier Transform Infrared Imaging analysis of dental pulp inflammatory diseases. Oral Dis. 2017 May;23(4):484–91.
254. Bambini F, Giannetti L, Memè L, Pellecchia M, Selvaggio R. Comparative analysis of direct and indirect implant impression techniques an in vitro study. An in vitro study. Minerva Stomatol. 2005 Jun;54(6):395–402.
255. Bambini F, Memè L, Pellecchia M, Sabatucci A, Selvaggio R. Comparative analysis of deformation of two implant/abutment connection systems during implant insertion. An in vitro study. Minerva Stomatol. 2005 Mar;54(3):129–38.
256. Memè L, Notarstefano V, Sampalmieri F, Orilisi G, Quinzi V. ATR-FTIR Analysis of Orthodontic Invisalign® Aligners Subjected to Various In Vitro Aging Treatments. Materials (Basel). 2021 Feb 9;14(4).
257. Lussi A. Erosive tooth wear - a multifactorial condition of growing concern and increasing knowledge. Monogr Oral Sci. 2006;20:1–8.
258. Holbrook WP, Árnadóttir IB, Hlöðversson SO, Arnarsdóttir E, Jónsson SH, Sæmundsson SR. The Basic Erosive Wear Examination (BEWE) applied retrospectively to two studies. Clin Oral Investig. 2014 Jul;18(6):1625–9.
259. Farahmand F, Sabbaghian M, Ghodousi S, Seddighoraee N, Abbasi M. Gastroesophageal reflux disease and tooth erosion: a cross-sectional observational study. Gut Liver. 2013 May;7(3):278–81.
260. Corrêa MCCSF, Lerco MM, Cunha M de LR de S da, Henry MAC de A. Salivary parameters and teeth erosions in patients with gastroesophageal reflux disease. Arq Gastroenterol. 2012;49(3):214–8.
261. Alavi G, Alavi A, Saberfiroozi M, Sarbazi A, Motamedi M, Hamedani S. Dental Erosion in Patients with Gastroesophageal Reflux Disease (GERD) in a Sample of Patients Referred to the Motahari Clinic, Shiraz, Iran. J Dent (Shiraz). 2014 Mar;15(1):33–8.
262. Alaraudanjoki V, Laitala ML, Tjäderhane L, Pesonen P, Lussi A, Ronkainen J, et al. Influence of Intrinsic Factors on Erosive Tooth Wear in a Large-Scale Epidemiological Study. Caries Res. 2016;50(5):508–16.
263. Vinesh E, Masthan K, Kumar MS, Jeyapriya SM, Babu A, Thinakaran M. A Clinicopathologic Study of Oral Changes in Gastroesophageal Reflux Disease, Gastritis, and Ulcerative Colitis. J Contemp Dent Pract. 2016 Nov 1;17(11):943–7.
264. Bambini F, Pellecchia M, Memè L, Santarelli A, Emanuelli M, Procaccini M, et al. Anti-Inflammatory Cytokines in Peri-Implant Soft Tissues: A Preliminary Study on Humans Using CDNA Microarray Technology. Eur J Inflamm. 2007 Sep 1;5(3):121–7.
265. Zini A, Krivoroutski Y, Vered Y. Primary prevention of dental erosion by calcium and fluoride: a systematic review. Int J Dent Hyg. 2014 Feb 29;12(1):17–24.
266. Larsen MJ. Chemical events during tooth dissolution. J Dent Res. 1990 Feb;69 Spec No:575–80; discussion 634-6.
267. Nunn JH, Gordon PH, Morris AJ, Pine CM, Walker A. Dental erosion -- changing prevalence? A review of British National childrens' surveys. Int J Paediatr Dent. 2003 Mar;13(2):98–105.
268. Wood I, Jawad Z, Paisley C, Brunton P. Non-carious cervical tooth surface loss: a literature review. J Dent. 2008 Oct;36(10):759–66.
269. Bartlett D, Ganss C, Lussi A. Basic Erosive Wear Examination (BEWE): a new scoring system for scientific and clinical needs. Clin Oral Investig. 2008 Mar;12 Suppl 1(Suppl 1):S65-8.
270. Bartlett D. Etiology and prevention of acid erosion. Compend Contin Educ Dent. 2009;30(9):616–20.
271. Barza M, Trikalinos TA, Lau J. Statistical considerations in meta-analysis. Infect Dis Clin North Am. 2009 Jun;23(2):195–210, Table of Contents.
272. Leucht S, Kissling W, Davis JM. How to read and understand and use systematic reviews and meta-analyses. Acta Psychiatr Scand. 2009 Jun;119(6):443–50.
273. Oxman AD, Cook DJ, Guyatt GH. Users' guides to the medical literature. VI. How to use an overview. Evidence-Based Medicine Working Group. JAMA. 1994 Nov 2;272(17):1367–71.
274. Abramson JH. WINPEPI (PEPI-for-Windows): computer programs for epidemiologists. Epidemiol Perspect Innov. 2004 Dec 17;1(1):6.
275. Guyatt GH, Oxman AD, Vist GE, Kunz R, Falck-Ytter Y, Alonso-Coello P, et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ. 2008 Apr 26;336(7650):924–6.
276. Hughes JA, West NX, Parker DM, Newcombe RG, Addy M. Development and evaluation of a low erosive blackcurrant juice drink in vitro and in situ. 1. Comparison with orange juice. J Dent. 1999 May;27(4):285–9.
277. Hughes JA, West NX, Parker DM, Newcombe RG, Addy M. Development and evaluation of a low erosive blackcurrant juice drink. 3. Final drink and concentrate, formulae comparisons in situ and overview of the concept. J Dent. 1999 Jul;27(5):345–50.
278. West NX, Hughes JA, Parker DM, Newcombe RG, Addy M. Development and evaluation of a low erosive blackcurrant juice drink. 2. Comparison with a conventional blackcurrant juice drink and orange juice. J Dent. 1999 Jul;27(5):341–4.
279. Hughes JA, Jandt KD, Baker N, Parker D, Newcombe RG, Eisenburger M, et al. Further modification to soft drinks to minimise erosion. A study in situ. Caries Res. 2002;36(1):70–4.
280. West NX, Hughes JA, Parker D, Weaver LJ, Moohan M, De'Ath J, et al. Modification of soft drinks with xanthan gum to minimise erosion: a study in situ. Br Dent J. 2004 Apr 24;196(8):478–81; discussion 467.
281. Hooper SM, Newcombe RG, Faller R, Eversole S, Addy M, West NX. The protective effects of toothpaste against erosion by orange juice: studies in situ and in vitro. J Dent. 2007 Jun;35(6):476–81.
282. Magalhães AC, Rios D, Delbem ACB, Buzalaf MAR, Machado MAAM. Influence of fluoride dentifrice on brushing abrasion of eroded human enamel: an in situ/ex vivo study. Caries Res. 2007;41(1):77–9.
283. Vieira A, Jager DHJ, Ruben JL, Huysmans MCDNJM. Inhibition of erosive wear by fluoride varnish. Caries Res. 2007;41(1):61–7.
284. De Oliveira PAD, Paiva SM, De Abreu MHNG, Auad SM. Dental Erosion in Children with Gastroesophageal Reflux Disease. Pediatr Dent. 2016;38(3):246–50.
285. Milani DC, Venturini APC, Callegari-Jacques SM, Fornari F. Gastro-oesophageal reflux disease and dental erosions in adults: influence of acidified food intake and impact on quality of life. Eur J Gastroenterol Hepatol. 2016 Jul;28(7):797–801.
286. Stojsin I, Brkanić T, Slavoljub Z. (Reflux disease as an etiological factor of dental erosion). Srp Arh Celok Lek. 2010;138(5–6):292–6.
287. Magalhães AC, Rios D, Martinhon CCR, Delbem ACB, Buzalaf MAR, Machado MA de AM. The influence of residual salivary fluoride from dentifrice on enamel erosion: an in situ study. Braz Oral Res. 2008;22(1):67–71.

288. Ballini A, Capodiferro S, Toia M, Cantore S, Favia G, De Frenza G, et al. Evidence-based dentistry: what's new? Int J Med Sci. 2007 Jun 6;4(3):174–8.
289. LeLorier J, Grégoire G, Benhaddad A, Lapierre J, Derderian F. Discrepancies between meta-analyses and subsequent large randomized, controlled trials. N Engl J Med. 1997 Aug 21;337(8):536–42.
290. Lyman GH, Kuderer NM. The strengths and limitations of meta-analyses based on aggregate data. BMC Med Res Methodol. 2005 Apr 25;5:14.
291. Grégoire G, Derderian F, Le Lorier J. Selecting the language of the publications included in a meta-analysis: is there a Tower of Babel bias? J Clin Epidemiol. 1995 Jan;48(1):159–63.
292. Saccomanno S, Quinzi V, Albani A, D'Andrea N, Marzo G, Macchiarelli G. Utility of Teleorthodontics in Orthodontic Emergencies during the COVID-19 Pandemic: A Systematic Review. Healthcare (Basel). 2022 Jun 14;10(6).
293. Dinoi MT, Marchetti E, Garagiola U, Caruso S, Mummolo S, Marzo G. Orthodontic treatment of an unerupted mandibular canine tooth in a patient with mixed dentition: a case report. J Med Case Rep. 2016 Dec 10;10(1):170.
294. Mummolo S, Nota A, Marchetti E, Padricelli G, Marzo G. The 3D Tele Motion Tracking for the Orthodontic Facial Analysis. Biomed Res Int. 2016;2016:1–6.
295. Dinoi MT, Marchetti E, Garagiola U, Caruso S, Mummolo S, Marzo G. Orthodontic treatment of an unerupted mandibular canine tooth in a patient with mixed dentition: a case report. J Med Case Rep. 2016 Dec 10;10(1):170.
296. Quinzi V, Saccomanno S, Manenti RJ, Giancaspro S, Coceani Paskay L, Marzo G. Efficacy of Rapid Maxillary Expansion with or without Previous Adenotonsillectomy for Pediatric Obstructive Sleep Apnea Syndrome Based on Polysomnographic Data: A Systematic Review and Meta-Analysis. Applied Sciences. 2020 Sep 17;10(18):6485.
297. Pasini M, Giuca MR, Ligori S, Mummolo S, Fiasca F, Marzo G, et al. Association between Anatomical Variations and Maxillary Canine Impaction: A Retrospective Study in Orthodontics. Applied Sciences. 2020 Aug 14;10(16):5638.
298. Campanella V, Gallusi G, Nardi R, Mea A, Di Taranto V, Montemurro E, et al. Dentinal substrate variability and bonding effectiveness: SEM investigation. J Biol Regul Homeost Agents. 2020;34(1 Suppl. 1):49-54. DENTAL SUPPLEMENT.
299. Termine N, Panzarella V, Ciavarella D, Lo Muzio L, D'Angelo M, Sardella A, et al. Antibiotic prophylaxis in dentistry and oral surgery: use and misuse. Int Dent J. 2009 Oct;59(5):263–70.
300. Compilato D, Cirillo N, Termine N, Kerr AR, Paderni C, Ciavarella D, et al. Long-standing oral ulcers: proposal for a new "S-C-D classification system". J Oral Pathol Med. 2009 Mar;38(3):241–53.
301. Lo Russo L, Ciavarella D, Salamini A, Guida L. Alignment of intraoral scans and registration of maxillo-mandibular relationships for the edentulous maxillary arch. J Prosthet Dent. 2019 May;121(5):737–40.
302. Ortu E, Di Nicolantonio S, Severino M, Cova S, Pietropaoli D, Monaco A. Effectiveness of elastodontic appliances in the treatment of malocclusions: a review of the literature. Eur J Paediatr Dent. 2024 Mar 1;25(1):57-60. doi: 10.23804/ejpd.2024.2030. Epub 2024 Feb 1. PMID: 38353510.