

Frühkindliche Karies: Folgeproblematiken und Tertiärprävention

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- [1] American Academy of Pediatric Dentistry. Policy on early childhood caries (ECC): Classifications, consequences, and preventive strategies. The Reference Manual of Pediatric Dentistry. Chicago, Ill.: American Academy of Pediatric Dentistry 2020; 79-81.
- [2] American academy of pediatric dentistry: Guideline on Management of the Developing Dentition and Occlusion in Pediatric Dentistry. *Pediatr Dent*. 2016; 38 (6): 289-301.
- [3] Casamassimo PS, Thikkurissy S, Edelstein BL, Maiorini E. Beyond the dmft: The human and economic cost of early childhood caries. *J Am Dent Assoc*. 2009; 140: 650–7.
- [4] Friedlaender EY, Rubin DM, Alpern ER, Mandell DS, Christian CW, Alessandrini EA. Patterns of health care use that may identify young children who are at risk for maltreatment. *Pediatrics*. 2005; 116: 1303–8.
- [5] Gormley A, Haworth S, Simancas-Pallares M, Holgerson PL, Esberg A, Shrestha P, Divaris K, Johansson I. Subtypes of early childhood caries predict future caries experience. *Community Dent Oral Epidemiol*. 2022;1 0.1111/cdoe.12795
- [6] Griffin SO, Gooch BF, Beltran E, Sutherland JN, Barsley R. Dental services, costs, and factors associated with hospitalization for Medicaid-eligible children, Louisiana 1996-97. *J Public Health Dent*. 2000; 60 (1): 21-7.
- [7] Grindefjord M, Dahllof G, Modeer T. Caries development in children from 2.5 to 3.5 years of age: a longitudinal study. *Caries Res*. 1995; 29 (6): 449-54.
- [8] Hinds K, Gregory JR. National diet and nutrition survey: children 11/2 to 41/2 years. Vol. 2: Report of the dental survey. London: HMSO; 1995.
- [9] Locker D. Concepts of oral health, disease and the quality of life. In: Slade GD, editor. *Measuring oral health and quality of life*. Chapel Hill: University of North Carolina, Dental Ecology; 1977: 11–23.

- [10] Low W, Tan S, Schwartz S. The effect of severe caries on the quality of life in young children. *Pediatr Dent*. 1999; 21 (6): 325-6.
- [11] Petersen PE, Estupinan-Day S, Ndiaye C. WHO's action for continuous improvement in oral health. *Bull World Health Organ*. 2005; 83: 642.
- [12] Ripa LW. Nursing caries: a comprehensive review. *Pediatr Dent* 1988; 10: 268–82.
- [13] Sander FM. Interzeptive Behandlung (Ch 4), aus: Zahn-Mund-Kiefer-Heilkunde: Lehrbuchreihe zur Aus- und Weiterbildung. 2011; ch (4): 58-75. Stuttgart-New York: Georg Thieme Verlag KG.
- [14] Schmoeckel J, Santamaria RM, Splieth CH. Long-term caries development in schoolchildren and the role of educational status. *Quintessence Int*. 2015; 46 (5): 409-15.
- [15] Schmoeckel J, Stanislawski N. Hinweise auf Kindeswohlgefährdung. *Wir in der Praxis*. 2018; 1: 33-40.
- [16] Schwartz S. A one-year statistical analysis of dental emergencies in a pediatric hospital. *J Can Dent Assoc*. 1994; 60 (11): 959-62, 66-8.
- [17] Sheller B, Williams BJ, Hays K, Mancl L. Reasons for repeat dental treatment under general anesthesia for the healthy child. *Pediatr Dent*. 2003; 25 :546–52.
- [18] Sheller B, Williams BJ, Lombardi SM. Diagnosis and treatment of dental caries-related emergencies in a children's hospital. *Pediatr Dent*. 1997; 19 (8): 470-5.
- [19] Simon T, Nwabueze I, Oueis H, Stenger J. Space maintenance in the primary and mixed dentitions. *J Mich Dent Assoc*. 2012; 94 (1): 38-40.
- [20] Splieth CH, Banerjee A, Bottenberg P, Breschi L, Campus G, Ekstrand KR, Giacaman RA, Haak R, Hannig M, Hickel R, Juric H, Lussi A, Machiulskiene V, Manton DJ, Jablonski-Momeni A, Opdam NJM, Paris S, Santamaría RM, Schwendicke F, Tassery H, Ferreira Zandona A, Zero DT, Zimmer S, Doméjean S. How to Intervene in the Caries Process in Children: A Joint ORCA and EFCD Expert Delphi Consensus Statement. *Caries Res*. 2020; 54 (4): 297-305. doi: 10.1159/000507692
- [21] TEAM DAJ (R. Basner, Dr. R. M. Santamaría, Dr. J. Schmoeckel, Dr. E. Schüler, Prof. Dr. Ch. H. Splieth). Epidemiologische Begleituntersuchungen zur

Gruppenprophylaxe. Deutsche Arbeitsgemeinschaft für Jugendzahnpflege e.V. (DAJ). Gutachten, Bonn 2017.

- [22] Valencia-Rojas N, Lawrence HP, Goodman D. Prevalence of early childhood caries in a population of children with history of maltreatment. J Public Health Dent. 2008; 68: 94–101.
- [23] Weintraub JA, Ramos-Gomez F, Jue B, Shain S, Hoover CI, Featherstone JD, et al. Fluoride varnish efficacy in preventing early childhood caries. J Dent Res. 2006; 85 (2): 172-6.
- [24] Wyne AH. Early childhood caries: nomenclature and case definition. Community Dent Oral Epidemiol. 1999; 27 (5): 313-5.

ZMK 11/2023 (39), 584-591

Interdisziplinäres Krankheitsbild: Medikamentös induzierte gingivale Hyperplasie

Dr. Miriam Cyris, Felix, Geus, Prof. Dr. Christian Graetz

1. Kimball RF. A Delayed Change of Phenotype following a Change of Genotype in Paramecium Aurelia. Genetics 1939;24:49-58.
2. Murakami S, Mealey BL, Mariotti A, Chapple ILC. Dental plaque-induced gingival conditions. J Periodontol 2018;89 Suppl 1:S17-S27.
3. Dongari-Bagtzoglou A, Research S, Therapy Committee AAoP. Drug-associated gingival enlargement. J Periodontol 2004;75:1424-1431.
4. Damdoun M, Varma SR, Nambiar M, Venugopal A. Calcium Channel Blockers Induced Gingival Overgrowth: A Comprehensive Review from a Dental Perspective. J Int Soc Prev Community Dent 2022;12:309-322.
5. De Falco D, Della Vella, F., Scivetti, M., Suriano, C., De Benedittis, M., Petruzzi, M. Non-Plaque Induced Diffuse Gingival Overgrowth: An Overview. Appl Sci 2022;12:31-37.
6. Dannewitz B, Eickholz, P. Glossar der Grundbegriffe für die Praxis - Ätiologie der Gingivawucherungen. Parodontologie 2015;26:435-440.

7. Sabarudin MA, Taib, H. Drug-influenced Gingival Enlargement: Overview of the Clinical Features and Assessment Methods. *J Dent* 2019;7:1-7.
8. Gaur S, Agnihotri R. Is dental plaque the only etiological factor in Amlodipine induced gingival overgrowth? A systematic review of evidence. *J Clin Exp Dent* 2018;10:e610-e619.
9. Tonsekar P, Tonsekar, V. Calcium-Channel-Blocker-Influenced Gingival Enlargement: A Conundrum Demystified. *Oral 1* 2021:236–249.
10. Hatahira H, Abe J, Hane Y, et al. Drug-induced gingival hyperplasia: a retrospective study using spontaneous reporting system databases. *J Pharm Health Care Sci* 2017;3:19.
11. Lauritano D, Palmieri A, Lucchese A, Di Stasio D, Moreo G, Carinci F. Role of Cyclosporine in Gingival Hyperplasia: An In Vitro Study on Gingival Fibroblasts. *Int J Mol Sci* 2020;21.
12. Portnoy PS, Lee, S.-Y., McMullen, A., Qu, V. Amlodipine-Induced Gingival Overgrowth: A Health Justice Issue. *Nurse Pract* 2022;18:123-127.
13. Neuhauser HK, Adler C, Rosario AS, Diederichs C, Ellert U. Hypertension prevalence, awareness, treatment and control in Germany 1998 and 2008-11. *J Hum Hypertens* 2015;29:247-253.
14. Neuhauser H, Kuhnert, R., Born, S. 12-Monats-Prävalenz von Bluthochdruck in Deutschland. *Journal of Health Monitoring* 2017;1.
15. Whelton PK, Carey RM, Aronow WS, et al. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Hypertension* 2018;71:1269-1324.
16. Finger JD, Busch MA, Du Y, et al. Time Trends in Cardiometabolic Risk Factors in Adults. *Dtsch Arztebl Int* 2016;113:712-719.
17. Neuhauser H, Sarganas, G. Hoher Blutdruck: Ein Thema für alle. Hrsg Robert Koch – Institut, Berlin GBE kompakt 6 2015;6:1-12.

18. Grandt D, Lappe, V., Schubert, I. Arzneimitteltherapie 2025. BARMER Arzneimittelreport. Schriftenreihe zur Gesundheitsanalyse Barmer, Berlin 2022.
19. Grover V KA, Marya C. Amlodipine Induced Gingival Hyperplasia. J Oral Health Comm Dent 2007;1:19-22.
20. Prisant LM, Herman W. Calcium channel blocker induced gingival overgrowth. J Clin Hypertens (Greenwich) 2002;4:310-311.
21. Fardal O, Lygre H. Management of periodontal disease in patients using calcium channel blockers - gingival overgrowth, prescribed medications, treatment responses and added treatment costs. J Clin Periodontol 2015;42:640-646.
22. Kaur G, Verhamme KM, Dieleman JP, et al. Association between calcium channel blockers and gingival hyperplasia. J Clin Periodontol 2010;37:625-630.
23. Papapanou PN, Sanz M, Buduneli N, et al. Periodontitis: Consensus report of workgroup 2 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions. J Periodontol 2018;89 Suppl 1:S173-S182.
24. Caton JG, Armitage G, Berglundh T, et al. A new classification scheme for periodontal and peri-implant diseases and conditions - Introduction and key changes from the 1999 classification. J Periodontol 2018;89 Suppl 1:S1-S8.
25. Lim SS, Vos T, Flaxman AD, et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. Lancet 2012;380:2224-2260.
26. Minden NJ, Fast TB. Evaluation of health history forms used in U.S. dental schools. Oral Surg Oral Med Oral Pathol 1994;77:105-109.
27. Schmalz G, Lange J, Krause F, et al. Evaluation of an individual anamnesis tool for teaching risk-oriented prevention - a pilot study in undergraduate dental students. BMC Med Educ 2022;22:648.
28. Tungare S, Paranjpe AG. Drug-Induced Gingival Overgrowth. In: StatPearls. Treasure Island (FL), 2023.
29. Meyle J, Jepsen, J. Der parodontale Screening-Index (PSI). Parodontologie 2000;11:17-21.

30. Sanz M, Herrera D, Kebschull M, et al. Treatment of stage I-III periodontitis-The EFP S3 level clinical practice guideline. J Clin Periodontol 2020;47 Suppl 22:4-60.
31. Graetz C, El-Sayed, K.F., Sälzer, S., Dörfer, C. E. S3-Leitlinie: Häusliches mechanisches Biofilmmangement in der Prävention und Therapie der Gingivitis. AWMF 2018.
32. van der Weijden F, Slot DE, van der Sluijs E, Hennequin-Hoenderdos NL. The efficacy of a rubber bristles interdental cleaner on parameters of oral soft tissue health-a systematic review. Int J Dent Hyg 2022;20:26-39.
33. Auschill T, Sälzer, S., Arweiler, N. S3-Leitlinie: Häusliches chemisches Biofilmmangement in der Prävention und Therapie der Gingivitis. AWMF 2018.
34. Leitlinienprogramm Onkologie (Deutsche Krebsgesellschaft DK, AWMF). S3-Leitlinie Diagnostik und Therapie des Mundhöhlenkarzinoms. AWMF 2021.
35. Holmstrup P, Plemons J, Meyle J. Non-plaque-induced gingival diseases. J Clin Periodontol 2018;45 Suppl 20:S28-S43.
36. Barsoum F, Prete BRJ, Ouanounou A. Drug-Induced Gingival Enlargement: A Review of Diagnosis and Current Treatment Strategies. Compend Contin Educ Dent 2022;43:276-285; quiz 286.

ZMK 11/2023 (39), 584–591

Die Behandlung der Parodontitis bei Menschen nach §22a

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- [1] Barbe AG, et al. Objective masticatory efficiency and subjective quality of masticatory function among patients with periodontal disease. J Clin Periodontol. 2020; 47 (11): p. 1344- 1353.
- [2] Barbe AG, et al. Xerostomia and hyposalivation in orthogeriatric patients with fall history and impact on oral health-related quality of life. Clin Interv Aging. 2018; 13: 1971-1979.
- [3] Dentino A, et al. Principles of periodontology. Periodontol 2000. 2013; 61 (1): 16-53.

- [4] Derman, S.H.M., Bleiel, D., and Barbe, A.G. Prävention und Parodontitistherapie im höheren Lebensalter und bei Pflegebedarf. 2023, 01 Juli [cited 2023 31.08]; Available from: <https://www.zm-online.de/artikel/2023/zm-2023-13/praevention-und-parodontitistherapie-im-hoeheren-lebensalter-und-bei-pflegebedarf>.
- [5] Gemeinsamer Bundesausschuss. Richtlinie des Gemeinsamen Bundesausschusses über Maßnahmen zur Verhütung von Zahnerkrankungen bei Pflegebedürftigen und Menschen mit Behinderungen (Richtlinie nach § 22a SGB V). 2017, 19. Oktober [cited 2023 31.08]; Available from: https://www.g-ba.de/downloads/62-492-3062/RL_Pflegebeduerftige-Zahn-22a-SGV_2022-12-15_iK-2023-02-15.PDF.
- [6] Gemeinsamer Bundesausschuss. Richtlinie des Gemeinsamen Bundesausschusses zur systematischen Behandlung von Parodontitis und anderer Parodontalerkrankungen (PAR-Richtlinie). 2020, 17. Dezember [cited 2023 31.08]; Available from: https://www.g-ba.de/downloads/62-492-2817/PAR-RL_2021-12-16_iK-2022-05-13.pdf.
- [7] Gemeinsamer Bundesausschuss. Beschluss des Gemeinsamen Bundesausschusses über eine Änderung der Richtlinie für eine ausreichende, zweckmäßige und wirtschaftliche vertragszahnärztliche Versorgung (Behandlungsrichtlinie): Behandlung von Parodontitis bei Versicherten nach § 22a SGB V außerhalb der systematischen Behandlung von Parodontitis und anderer Parodontalerkrankungen. 2021, 6. Mai [cited 2023 31.08]; Available from: https://www.g-ba.de/downloads/39-261-4814/2021-05-06_Behandlungs-RL_PAR-vulnerable-Gruppen_BAnz.pdf.
- [8] Iwasaki M, et al. Dentition status and frailty in community-dwelling older adults: A 5-year prospective cohort study. *Geriatr Gerontol Int*. 2018; 18(2): 256-262.
- [9] Jordan RA, et al. The Fifth German Oral Health Study (Fünfte Deutsche Mundgesundheitsstudie, DMS V) - rationale, design, and methods. *BMC Oral Health* 2014; 14: 161.
- [10] Kosaka T, et al. The effect of periodontal status and occlusal support on masticatory performance: the Suita study. *J Clin Periodontol*. 2014; 41 (5): 497-503.

- [11] Nitschke I, Micheelis W. 16 Krankheits-und Versorgungsprävalenzen bei Älteren Senioren mit Pflegebedarf. Fünfte Deutsche Mund-gesundheits-studie 2016; 39 (2): 557.
- [12] Pedersen AM, et al. Saliva and gastrointestinal functions of taste, mastication, swallowing and digestion. Oral Dis. 2002; 8 (3): 117-29.
- [13] Statistisches Bundesamt Destatis. Statistischer bericht - pflegevorausberechnung - deutschland und bundesländer, berichtszeitraum 2022-2070. 2023; Available from: https://www.destatis.de/DE/Presse/Pressemitteilungen/2023/03/PD23_124_12.html.
- [14] Zenthofer A, et al. Comparison of oral health among older people with and without dementia. Community Dent Health 2014; 31 (1): 27-31

ZMK 11/12-2023 (39), 592-602

Die apikale Parodontitis persistierender Milchzähne – 3 Fallberichte zur möglichen endodontologischen Therapie

Vadym Slabkovskyi

- [1] Polder BJ, Van't Hof MA, Van der Linden FP, Kuijpers-Jagtman AM. A meta-analysis of the prevalence of dental agenesis of permanent teeth. Community Dent Oral Epidemiol. 2004; 32 (3): 217-26. doi: 10.1111/j.1600-0528.2004.00158.x. PMID: 15151692.
- [2] Brook AH. A unifying aetiological explanation for anomalies of human tooth number and size. Arch Oral Biol. 1984; 29 (5): 373-8. doi: 10.1016/0003-9969(84)90163-8. PMID: 6611147.
- [3] Dos Santos CCO, Melo DL, da Silva PP, Normando D. What is the survival rate of deciduous molars in cases with agenesis of premolar successors? A systematic review. Angle Orthod. 2022; 92 (1): 110-117. doi: 10.2319/123020-1039.1. PMID: 34329385; PMCID: PMC8691466.
- [4] Hvaring CL, Øgaard B, Stenvik A, Birkeland K. The prognosis of retained primary molars without successors: infraocclusion, root resorption and restorations in 111 patients. Eur J Orthod. 2014; 36 (1): 26-30. doi: 10.1093/ejo/cjs105. Epub 2013 Jan 12. PMID: 23314329.

- [5] Bjerklin K, Bennett J. The long-term survival of lower second primary molars in subjects with agenesis of the premolars. *Eur J Orthod.* 2000; 22 (3): 245-55. doi: 10.1093/ejo/22.3.245. PMID: 10920557.
- [6] Nordquist I, Lennartsson B, Paulander J. Primary teeth in adults--a pilot study. *Swed Dent J.* 2005; 29 (1): 27-34. PMID: 15898361.
- [7] Mohammed, Dana & Saadoon, Rawaa & Al-Essa, Hussein. (2018). Retention of Primary Second Molars without a Permanent Successor: A Review Article. 7. 80-89.
- [8] Harokopakis-Hajishengallis E. Physiologic root resorption in primary teeth: molecular and histological events. *J Oral Sci.* 2007; 49 (1): 1-12. doi:10.2334/josnurd.49.1: 340–346
- [9] CONSOLARO, Alberto. Should deciduous teeth be preserved in adult patients? How about stem cells? Is it reasonable to preserve them? *Dental Press J. Orthod.* 2016; 21 (2): 15-27.
- [10] Andreasen JO: Relationship between surface and inflammatory resorption and changes in the pulp after replantation of permanent incisors in monkeys. *J Endod.* 1981; 7: 294–301.
- [11] Hoen MM, Pink FE. Contemporary endodontic retreatments: An analysis based on clinical treatment findings. *J Endod.* 2002; 28: 834-6.
- [12] Bakland LK, Andreasen JO. Will mineral trioxide aggregate replace calcium hydroxide in treating pulpal and periodontal healing complications subsequent to dental trauma? A review. *Dent Traumatol.* 2012; 28 (1): 25-32. doi: 10.1111/j.1600-9657.2011.01049.x. Epub 2011 Sep 5. PMID: 21895969.
- [13] Andreasen JO. Treatment of fractured and avulsed teeth. *ASDC J Dent Child.* 1971; 38: 29–35.
- [14] Fouad AF, Abbott PV, Tsilingaridis G, Cohenca N, Lauridsen E, Bourguignon C, O'Connell A, Flores MT, Day PF, Hicks L, Andreasen JO, Cehreli ZC, Harlamb S, Kahler B, Oginni A, Semper M, Levin L. International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 2. Avulsion of permanent teeth. *Dent Traumatol.* 2020; 36 (4): 331-342. doi: 10.1111/edt.12573. Epub 2020 Jun 13. PMID: 32460393.

- [15] Torabinejad, M, Parirokh, M, Dummer, PMH. Mineral trioxide aggregate and other bioactive endodontic cements: an updated overview – part II: other clinical applications and complications. *International Endodontic Journal* 2018; 51: 284– 317.
- [16] Tabassum, Sadia & Khan, FarhanRaza. Failure of endodontic treatment: The usual suspects. *European Journal of Dentistry*. 2016; 10: 144. 10.4103/1305-7456.175682.
- [17] Hargreaves, Kenneth M., Stephen Cohen, and Louis H. Berman. *Cohen's Pathways of the Pulp*. 10th ed. St. Louis, Mo.: Mosby Elsevier, 2011. MLA Citation Hargreaves, Kenneth M., Stephen Cohen, and Louis H. Berman. *Cohen's Pathways of the Pulp*.
- [18] Ansari, Ghassem & Mirkarimi, Mahkameh. Gutta Percha Root Filling in 2nd Primary Molar Teeth with Missing Successor: A Challenging Approach. *Research Journal of Biological Sciences*. 2008; 2: 251-254.
- [19] Bolla N, Naik BD, Kavuri SR, Velagala LD. Obturation of a retained primary mandibular second molar with missing successor using guttapercha: A case report. *JIDA*. 2011; 5: 194–95.
- [20] Chhabra N. Endodontic management of a four rooted retained primary maxillary second molar. *J Conserv Dent*. 2013;16 (6): 576-578. doi:10.4103/0972-0707.120935
- [21] Naka S, Kokomoto K, Ohata J, Okawa R, Nomura R. Nakano K. Displacement of maxillary right second premolar caused by gutta percha filling in corresponding primary molar. *Pediatric Dental Journal*. <https://doi.org/10.1016/j.pdj.2017.10.002>
- [22] Kaur, Jasmeen; Gupta, Bhavleen; Mahajan, Neeraj. *Paediatric Dentistry: Management of missing successor of second primary molar teeth with gutta percha as a root canal filling material*. *Clinical Dentistry*. 2018: 12 (6): p20-24.
- [23] Parvesh Bhuria¹, Vineet Inder Singh Khinda² , Gurlal Singh Brar³ , Nitika Bajaj⁴. Unusual Root Resorption of Endodontically Treated Primary Molar with Missing Succedaneous Permanent Premolar: A Rare Case Report. *Int J Dent Med Res*. 2015; 1 (6).
- [24] O'Sullivan SM, Haretwell GR. Obturation of a retained primary mandibular second molar using mineral trioxide aggregate: A case report. *J Endod*. 2001; 27: 703–05.
- [25] Jeevanandan, Ganesh. Obturation of a Retained Primary Maxillary Second Molar Using Biodentine™: A Case Report. *Journal of Clinical and Diagnostic Research*. 2017; 11. 34. 10.7860/JCDR/2017/23966.9218.

- [26] Tebbeb, Nesrine & Zouiten, Sonia & Chafra, Hanen & Boughzala, Abdellatif. Pulpectomy using mineral trioxide aggregate of a nonvital primary molar with no permanent premolar successor. Endodontology. 2017; 29. 164. 10.4103/endo.endo_48_17.
- [27] Tunc ES, Bayrak S. Usage of white mineral trioxide aggregate in a non-vital primary molar with no permanent successor. Aust Dent J 2010; 55 (1): 92-5.
- [28] Bezgin T, Ozgul BM, Arikan V, Sari S. Root canal filling in primary molars without successors: Mineral trioxide aggregate versus gutta-percha/AH-Plus. Aust Endod J. 2016; 42 (2): 73-81. doi: 10.1111/aej.12132. Epub 2015 Nov 4. PMID: 26534871.
- [29] Silva, Emmanuel & Cardoso, Milla & Rodrigues, Jéssica & De-Deus, Gustavo & Fidalgo, Tatiana. Solubility of bioceramic- and epoxy resin-based root canal sealers: A systematic review and meta-analysis. Australian endodontic journal : the journal of the Australian Society of Endodontology Inc. 2021; 47. 10.1111/aej.12487.
- [30] AL-Haddad A. Bioceramic-Based Root Canal Sealers: A Review. Int J Biomater. 2016; Volume 2016: Article ID 9753210

ZMK 11/ 2023 (39), 612-619

Klinische Indikation und Anwendung eines freien Schleimhauttransplantates vs. subepitheliales Bindegewebetransplantat

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- [1] Agudio G, Cortellini P, Buti J, Pini Prato G. Periodontal Conditions of Sites Treated With Gingival Augmentation Surgery Compared With Untreated Contralateral Homologous Sites: An 18- to 35-Year Long-Term Study. J Periodontol 2016; 87 (12): 1371-1378. doi:10.1902/jop.2016.160284
- [2] Ainamo A, Bergenholtz A, Hugoson A, Ainamo J. Location of the mucogingival junction 18 years after apically repositioned flap surgery. Journal of Clinical Periodontology 1992; 19 (1): 49-52. doi:10.1111/j.1600-051x.1992.tb01148.x

- [3] Allen AL. Use of the suprapariosteal envelope in soft tissue grafting for root coverage. I. Rationale and technique. *Int J Periodontics Restorative Dent.* 1994; 14 (3): 216-227.
- [4] Bachmann A, Bernimoulin JP. [Free grafts of attached and papillary gingiva]. *SSO Schweiz Monatsschr Zahnheilkd.* 1980; 90(4): 374-380.
- [5] Baker DL, Seymour GJ. The possible pathogenesis of gingival recession. A histological study of induced recession in the rat. *Journal of Clinical Periodontology* 1976; 3 (4): 208-219. doi:10.1111/j.1600-051x.1976.tb00040.x
- [6] Bernimoulin J, Curilovic Z. Gingival recession and tooth mobility. *J Clin Periodontol.* 1977; 4 (2): 107-114.
- [7] Bernimoulin JP, Schroeder HE. Changes in the differentiation pattern of oral mucosal epithelium following heterotopic connective tissue transplantation in man. *Pathol Res Pract.* 1980; 166 (2-3): 290-312. doi:10.1016/S0344-0338(80)80136-1
- [8] Cairo F, Nieri M, Cincinelli S, Mervelt J, Pagliaro U. The interproximal clinical attachment level to classify gingival recessions and predict root coverage outcomes: an explorative and reliability study. *Journal of Clinical Periodontology* 2011; 38 (7): 661-666.
- [9] Caton JG, Armitage G, Berglundh T, Chapple ILC, Jepsen S, Kornman KS, Tonetti MS. A new classification scheme for periodontal and peri-implant diseases and conditions - Introduction and key changes from the 1999 classification. *J Clin Periodontol.* 2018; 45 Suppl 20: S1-S8. doi:10.1111/jcpe.12935
- [10] Chambrone L, Tatakis DN. Long-Term Outcomes of Untreated Buccal Gingival Recessions: A Systematic Review and Meta-Analysis. *Journal of Periodontology* 2016; 87 (7): 796-808. doi:10.1902/jop.2016.150625
- [11] Checchi L, Daprile G, Gatto MR, Pelliccioni GA. Gingival recession and toothbrushing in an Italian School of Dentistry: a pilot study. *Journal of Clinical Periodontology* 1999; 26 (5): 276-280. doi:10.1034/j.1600-051x.1999.260502.x
- [12] Cortellini P, Bissada NF. Mucogingival conditions in the natural dentition: Narrative review, case definitions, and diagnostic considerations. *J Clin Periodontol.* 2018a; 45 Suppl 20: S190-S198. doi:10.1111/jcpe.12948

- [13] Cortellini P, Bissada NF. Mucogingival conditions in the natural dentition: Narrative review, case definitions, and diagnostic considerations. *J Periodontol.* 2018b; 89 Suppl 1: S204-S213. doi:10.1002/JPER.16-0671
- [14] Daprile G, Gatto MR, Checchi L. The evolution of buccal gingival recessions in a student population: a 5-year follow-up. *Journal of Periodontology* 2007; 78 (4): 611-614. doi:10.1902/jop.2007.060277
- [15] de Trey E, Bernimoulin JP. Influence of free gingival grafts on the health of the marginal gingiva. *J Clin Periodontol.* 1980; 7 (5): 381-393. doi:10.1111/j.1600-051x.1980.tb02011.x
- [16] Fischer KR, Kunzlberger A, Donos N, Fickl S, Friedmann A. Gingival biotype revisited-novel classification and assessment tool. *Clin Oral Investig.* 2018; 22 (1): 443-448. doi:10.1007/s00784-017-2131-1
- [17] Gumus P, Buduneli E. Graft stabilization with cyanoacrylate decreases shrinkage of free gingival grafts. *Aust Dent J.* 2014; 59 (1): 57-64. doi:10.1111/adj.12149
- [18] Hagewald S, Spahr A, Rompola E, Haller B, Heijl L, Bernimoulin JP. Comparative study of Emdogain and coronally advanced flap technique in the treatment of human gingival recessions. A prospective controlled clinical study. *J Clin Periodontol.* 2002; 29 (1): 35-41.
- [19] Jepsen S, Caton JG, Albandar JM, Bissada NF, Bouchard P, Cortellini P, Fan J. Periodontal manifestations of systemic diseases and developmental and acquired conditions: Consensus report of workgroup 3 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions. *Journal of Clinical Periodontology* 2018; 45: S219-S229.
- [20] Kallestål C, Matsson L, Holm AK. Periodontal conditions in a group of Swedish adolescents. (I). A descriptive epidemiologic study. *Journal of Clinical Periodontology* 1990; 17 (9): 601-608.
- [21] Kaner D. Das freie Schleimhauttransplantat—ein Klassiker zur Erzeugung keratinisierter Gingiva und Mukosa an Zähnen und Implantaten. *Parodontologie* 2016; 27 (3): 265-269.

- [22] Karring T, Ostergaard E, Loe H. Conservation of tissue specificity after heterotopic transplantation of gingiva and alveolar mucosa. *Journal of Periodontal Research* 1971; 6 (4): 282-293. doi:10.1111/j.1600-0765.1971.tb00619.x
- [23] Khocht A, Simon G, Person P, Denepitiya JL. Gingival recession in relation to history of hard toothbrush use. *Journal of Periodontology* 1993; 64 (9), 900-905. doi:10.1902/jop.1993.64.9.900
- [24] Kim DM, Neiva R. Periodontal soft tissue non-root coverage procedures: a systematic review from the AAP Regeneration Workshop. *J Periodontol*. 2015; 86 (2 Suppl): S56-72. doi:10.1902/jop.2015.130684
- [25] Lang NP, Loe H. The relationship between the width of keratinized gingiva and gingival health. *Journal of Periodontology* 1972; 43 (10): 623-627. doi:10.1902/jop.1972.43.10.623
- [26] Loe H, Anerud A, Boysen H, Smith M. The natural history of periodontal disease in man. The rate of periodontal destruction before 40 years of age. *Journal of Periodontology* 1978; 49 (12): 607-620. doi:10.1902/jop.1978.49.12.607
- [27] Lost C. Depth of alveolar bone dehiscences in relation to gingival recessions. *Journal of Clinical Periodontology* 1984; 11 (9): 583-589. doi:10.1111/j.1600-051x.1984.tb00911.x
- [28] Lundberg M, Wennstrom JL. Development of gingiva following surgical exposure of a facially positioned unerupted incisor. *Journal of Periodontology* 1988; 59 (10): 652-655. doi:10.1902/jop.1988.59.10.652
- [29] McGuire MK, Nunn M. Evaluation of human recession defects treated with coronally advanced flaps and either enamel matrix derivative or connective tissue. Part 1: Comparison of clinical parameters. *J Periodontol*. 2003; 74 (8): 1110-1125. doi:10.1902/jop.2003.74.8.1110
- [30] McGuire MK, Scheyer ET, Schupbach P. A Prospective, Case-Controlled Study Evaluating the Use of Enamel Matrix Derivative on Human Buccal Recession Defects: A Human Histologic Examination. *J Periodontol*. 2016; 87 (6): 645-653. doi:10.1902/jop.2016.150459
- [31] Miller PD Jr. A classification of marginal tissue recession. *International Journal of Periodontics and Restorative Dentistry* 1985; 5 (2): 8-13.

- [32] Miyasato M, Crigger M, Egelberg J. Gingival condition in areas of minimal and appreciable width of keratinized gingiva. *Journal of Clinical Periodontology* 1977; 4 (3): 200-209. doi:10.1111/j.1600-051x.1977.tb02273.x
- [33] Nabers JM. Free gingival grafts. *Periodontics* 1966; 4 (5): 243-245.
- [34] Pasquinelli KL. The histology of new attachment utilizing a thick autogenous soft tissue graft in an area of deep recession: a case report. *International Journal of Periodontics and Restorative Dentistry* 1995; 15 (3): 248-257.
- [35] Penne, BM, Tabor JC, King KO, Towner JD, Fritz BD, Higgason JD. Free masticatory mucosa graft. *J Periodontol.* 1969; 40 (3): 162-166. doi:10.1902/jop.1969.40.3.162
- [36] Rocuzzo M, Grasso G, Dalmaso P. Keratinized mucosa around implants in partially edentulous posterior mandible: 10-year results of a prospective comparative study. *Clin Oral Implants Res.* 2016; 27 (4): 491-496. doi:10.1111/clr.12563
- [37] Sangnes G. Traumatization of teeth and gingiva related to habitual tooth cleaning procedures. *Journal of Clinical Periodontology* 1976; 3 (2): 94-103. doi:10.1111/j.1600-051x.1976.tb01855.x
- [38] Sculean A, Chappuis V, Cosgarea R. Coverage of mucosal recessions at dental implants *Periodontol* 2000. 2017; (73) 1: 134-140.
- [39] Susin C, Haas AN, Oppermann RV, Haugejorden O, Albandar JM. Gingival recession: epidemiology and risk indicators in a representative urban Brazilian population. *J Periodontol.* 2004; 75 (10): 1377-1386. doi:10.1902/jop.2004.75.10.1377
- [40] Tatakis DN, Chambrone L, Allen EP, Langer B, McGuire MK, Richardson CR, Zadeh HH. Periodontal soft tissue root coverage procedures: a consensus report from the AAP Regeneration Workshop. *Journal of Periodontology* 2015; 86 (2 Suppl): S52-55. doi:10.1902/jop.2015.140376
- [41] Trott JR, Cross HG. An analysis of the principle reasons for tooth extractions in 1813 patients in Manitoba. *Dent Pract Dent Rec.* 1996; 17 (1): 20-27.
- [42] Vehkalahti M. Occurrence of gingival recession in adults. *Journal of Periodontology* 1989; 60 (11): 599-603. doi:10.1902/jop.1989.60.11.599

- [43] Wennstrom J, Lindhe J. Plaque-induced gingival inflammation in the absence of attached gingiva in dogs. *Journal of Clinical Periodontology* 1993a; 10 (3): 266-276. doi:10.1111/j.1600-051x.1983.tb01275.x
- [44] Wennstrom J, Lindhe J. Role of attached gingiva for maintenance of periodontal health. Healing following excisional and grafting procedures in dogs. *J Clin Periodontol.* 1983b; 10 (2): 206-221.
- [45] Zucchelli G. *Ästhetische Parodontalchirurgie* (Vol. 1). Berlin: Quintessenz Verlag, 2014.

ZMK 11/2023 (40), 622-628

Studie: Ökonomischer Einfluss auf ökologische und soziale Praxisentscheidungen

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1. Agache I, Sampath V, Aguilera J, Akdis C, Akdis M, Barry M, Bouagnon A, Chinthrajah S, Collins W, Dulitzki C, Erny B, Gomez J, Goshua A, Jutel M, Kizer KW, Kline O, LaBeaud AD, Pali-Schöll I, Perrett KP, Peters RL, Plaza MP, Prunicki M, Sack T, Salas RN, Sindher SB, Sokolow SH, Thiel C, Veidis E, Wray BD, Traidl-Hoffmann C, Witt C, Nadeau KC. Climate change and global health: A call to more research and more action. *Allergy* 2022;77(5):1389-1407
2. Bernhardt K. Der ökonomische Einfluss auf ökologische und soziale Entscheidungen in der zahnmedizinischen Praxis – eine empirische Analyse. Thesis; SRH Riedlingen; 2023
3. Brauer HU, Bartols A, Hellmann D, Dick M. Besteht eine berufsethische Verpflichtung zur Umsetzung einer nachhaltigen Zahnmedizin in Deutschland? Ein professionstheoretischer Diskurs. *DZZ* 2023;78(5)
4. Duane B, Stancliffe R, Miller FA, Sherman J, Pasdeki-Clewer E. Sustainability in dentistry: A multifaceted approach needed. *J Dent Res* 2020;99(9):998-1003
5. Hegenauer M, Brauer HU, Bernhardt K, Bartols A, Hellmann D. Nachhaltigkeit in der Zahnmedizin. *Zahnmedizin up2date* 2023;17(2):129-141

6. Khan MA. Sustainable development: The key concepts, issues and implications. J Sustain Dev 1995;3(2):63-69
7. Kuckartz U. Einführung in die computergestützte Analyse qualitativer Daten. 4. Aufl.; Wiesbaden; 2022
8. Mezger NCS, Thöne M, Wellstein I, Schneider F, Litke N, Führer AG, Clar C, Kandelhardt EJ. Climate protection in practices - current status, motivation and challenges in outpatient care. Z Evid Fortbild Qual Gesundheitswes 2021 Nov;166:44-54
9. Ostertag K, Bratan T, Gandenberger C, Hüsing B, Pfaff M. Ressourcenschonung im Gesundheitssektor - Erschließung von Synergien zwischen den Politikfeldern Ressourcenschonung und Gesundheit. Umweltbundesamt; 2021
10. Purvis B, Mao Y, Robinson D. Three pillars of sustainability: in search of conceptual origins. Sustain Sci 2019;14:681-695

ZMK 11/2023 (39), 633

Gender Dentistry

Die geschlechtsspezifischen Unterschiede der Patientinnen und Patienten

- [1] Gleissner CE. Gender Dentistry – Was ist Fakt? ZMK 05.01.2017. https://www.zmk-aktuell.de/fachgebiete/allgemeine-zahnheilkunde/story/gender-dentistry--was-ist-fakt__4909.html
- [2] Gleissner C. Welchen Einfluss hat das Geschlecht auf die Mundgesundheit? Bundesgesundheitsblatt volume 57, pages 1099–1106 (2014). <https://link.springer.com/article/10.1007/s00103-014-2018-0>
- [3]¹ Institut der Deutschen Zahnärzte im Auftrag von Bundeszahnärztekammer und Kassenzahnärztlicher Bundesvereinigung. Fünfte Deutsche Mundgesundheitsstudie (DMS V) – Kurzfassung. Berlin/Köln, August 2016.
- [4] Schulze A. Parodontitis korrelierte endokrinologische Veränderungen. ZWP Online 15.04.2011. <https://www.zwp-online.info/fachgebiete/parodontologie/grundlagen/parodontitis-korrelierte-endokrinologische-veraenderungen>

- [6] Su S et al. Comparing oral health behaviours of men and women in the United States. J Dent. 2022 May 8;122:104157.
- [7] Robert Koch-Institut (Hrsg.) (2014) Gesundheitliche Lage der Männer in Deutschland. Beiträge zur Gesundheitsberichterstattung des Bundes. RKI, Berlin.
- [8] Statista. Welche der folgenden Zahnpflegeprodukte nutzen Sie regelmäßig? 12.06.2014.
<https://de.statista.com/statistik/daten/studie/449791/umfrage/umfrage-zum-haeufigkeit-der-nutzung-von-zahnpflegeprodukten-nach-geschlecht-in-deutschland/>
- [9] S3-Leitlinie: Häusliches mechanisches Biofilmmangement in der Prävention und Therapie der Gingivitis. AWMF-Registernummer: 083-022, Stand: November 2018, Amendment: Dezember 2020.
- [10] S3-Leitlinie: Häusliches chemisches Biofilmmangement in der Prävention und Therapie der Gingivitis. AWMF-Registernummer: 083-016, Stand: November 2018, Amendment: Dezember 2020.
- [11] Minah GE et al. Effects of 6 months use of an antiseptic mouthrinse on supragingival dental plaque microflora. J Clin Periodontol. 1989 Jul;16(6):347-52.

ZMK 11/2023 (39), 634-35

Die Guided Biofilm Therapy bleibt der absolute Favorit

Große weltweite Patienten-Befragung zur Prophylaxe-Methode

- 1 Sälzer S, Graetz C, Dörfer CE, et al. Contemporary practices for mechanical oral hygiene to prevent periodontal disease. Periodontology 2000. 2020;84(1):35-44.
<https://pubmed.ncbi.nlm.nih.gov/32844413/>
<https://onlinelibrary.wiley.com/doi/pdfdirect/10.1111/prd.12332>
- 2 Axelsson P, Nystrom B, Lindhe J. The long-term effect of a plaque control program on tooth mortality, caries and periodontal disease in adults. Results after 30 years of maintenance. J Clin Periodontol. 2004;31(9):749-57. Epub 2004/08/18.
<https://pubmed.ncbi.nlm.nih.gov/15312097/>

- 3 Tonetti MS, Chapple ILC, Jepsen S, et al. Primary and secondary prevention of periodontal and peri-implant diseases. *Journal of Clinical Periodontology*. 2015;42:S1-S4. <https://pubmed.ncbi.nlm.nih.gov/25683242/>
- 4 Bastendorf K, Strafela-Bastendorf N. Auf das klinische Protokoll kommt es an – PZR, UPT und GBT. *Quintessenz*. 2020;71(12):1380-9.
- 5 Vouros I, Antonoglou GN, Anoixiadou S, et al. A novel biofilm removal approach (Guided Biofilm Therapy) utilizing erythritol air-polishing and ultrasonic piezo instrumentation: A randomized controlled trial. *Int J Dent Hyg*. 2021;n/a(n/a). Epub 2021/07/05. <https://www.ncbi.nlm.nih.gov/pubmed/34218516>
- 6 Bischoff JG. Herausforderung Prophylaxezentrum. *Zahnarzt Wirtschaft Praxis*. 2018(6):16-9.
- 7 Bühler J, Amato M, Weiger R, et al. A systematic review on the patient perception of periodontal treatment using air polishing devices. *Int J Dent Hyg*. 2016;14(1):4-14. Epub 2015/01/27. <https://www.ncbi.nlm.nih.gov/pubmed/25619863>
- 8 Bühler J, Amato M, Weiger R, et al. A systematic review on the effects of air polishing devices on oral tissues. *Int J Dent Hyg*. 2016;14(1):15-28. Epub 2015/02/19. <https://www.ncbi.nlm.nih.gov/pubmed/25690301>
<https://onlinelibrary.wiley.com/doi/10.1111/idh.12120>
- 9 Fu JH, Wong LB, Tong HJ, et al. Conventional versus comprehensive dental prophylaxis: comparing the clinical outcomes between rubber cup and air polishing and the importance of plaque disclosure. *Quintessence Int*. 2021;0(0):0. Epub 2021/01/26. <https://pubmed.ncbi.nlm.nih.gov/33491396/>
- 10 Lang N, A. L, KD. B. Wissenschaftlicher Konsensus Guided Biofilm Therapy-Protokoll. Ein neues Konzept für die primäre und sekundäre Prävention. 2019.
- 11 Arefnia B, Koller M, Wimmer G, et al. In Vitro Study of Surface Changes Induced on Enamel and Cementum by Different Scaling and Polishing Techniques. *Oral Health Prev Dent*. 2021;19(1):85-92. Epub 2021/01/30. <https://www.ncbi.nlm.nih.gov/pubmed/33511822>
- 12 Burkhardt AS, et al. Effect of air-polishing using erythritol on surface roughness of enamel and dentine compared to conventional methods. Poster presented at the EuroPerio, Copenhagen 2022. 2022.

- 13 Stiftung Warentest. Weit aufmachen, bitte. Stiftung Warentest: Professionelle Zahnreinigung. test. 2015(7):86-90.
- 14 Mensi M, Scotti E, Sordillo A, et al. Plaque disclosing agent as a guide for professional biofilm removal: A randomized controlled clinical trial. Int J Dent Hyg. 2020;18(3):285-94. Epub 2020/04/30. <https://www.ncbi.nlm.nih.gov/pubmed/32348624>
- 15 Donnet M, Fournier M, Schmidlin PR, et al. A Novel Method to Measure the Powder Consumption of Dental Air-Polishing Devices. Applied Sciences. 2021;11(3):1101. <https://www.mdpi.com/2076-3417/11/3/1101>
- 16 Koch JH. Die „Guided Biofilm Therapy“ ist der absolute Favorit bei den Patienten. Weltweite Umfrage zu bevorzugter Prophylaxe-Methode. ZMK. 2022;38(4):183-5.
- 17 Feil PH, Grauer JS, Gadbury-Amyot CC, et al. Intentional use of the Hawthorne effect to improve oral hygiene compliance in orthodontic patients. J Dent Educ. 2002;66(10):1129-35. <https://www.ncbi.nlm.nih.gov/pubmed/12449206>
- 18 Furrer C, Battig R, Votta I, et al. Patientenakzeptanz nach Umstellung auf «Guided Biofilm Therapy». Swiss Dent J. 2021;131(3):229-34. <https://pubmed.ncbi.nlm.nih.gov/33666383/>