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Präeruptive intrakoronale Resorption (PEIR) – mögliche Therapieansätze zu einer seltenen Pathologie

- [1] McNamara CM, Foley T, O'Sullivan VR, Crowley N, McConnell RJ. External resorption presenting as an intra-coronal radiolucent lesion in a pre-eruptive tooth. *Oral Dis.* 1997; 3 (3): 199–201.
- [2] Skillen WG. So-called "intra-follicular caries". *Ill Dent J.* 1941; 10: 307–8.
- [3] Mueller BH, Lichty GC, Talerico ME, Bugg JL Jr. "Caries-like" resorption of unerupted permanent teeth. *J Pedod.* 1980; 4 (2): 166–72.
- [4] Satish V, Cm P, Kv H. Occult Caries: The Hidden Truth. *Int J Clin Pediatr Dent.* 2010; 3 (3): 225-9. doi: 10.5005/jp-journals-10005-1083i. Epub 2010 Sep 15. PMID: 27616849; PMCID: PMC4993833.
- [5] Konde S, Sri Darshini CS, Agarwal M, Peethambar P. Unrevealed Caries in Unerupted Teeth: A Prevalence Study. *Contemp Clin Dent.* 2018; 9 (Suppl 2): S305-S308. doi: 10.4103/ccd.ccd_291_18. PMID: 30294162; PMCID: PMC6169283.
- [6] Seow WK, Lu PC, McAllan LH. Prevalence of pre-eruptive intra-coronal dentine defects from panoramic radiographs. *Pediatr Dent.* 1999a; 21 (6): 332–9.
- [7] Al-Batayneh OB, AlTawashi EK. Pre-eruptive intra-coronal resorption of dentine: a review of aetiology, diagnosis, and management. *Eur Arch Paediatr Dent.* 2020; 21 (1): 1-11. doi: 10.1007/s40368-019-00470-4. Epub 2019 Aug 14. PMID: 31414395.
- [8] Hülsmann M, Pabel S. Präeruptive intrakoronale Resorption. *Endodontie* 2021; 273-280.
- [9] Konde S, Sri Darshini CS, Agarwal M, Peethambar P. Unrevealed Caries in Unerupted Teeth: A Prevalence Study. *Contemp Clin Dent.* 2018; 9 (Suppl 2): S305-S308. doi: 10.4103/ccd.ccd_291_18. PMID: 30294162; PMCID: PMC6169283.
- [10] Al-Tuwirqi A, Seow WK. A controlled study of pre-eruptive intra-coronal resorption and dental development. *J Clin Pediatr Dent.* 2017; 41 (5): 374–80. <https://doi.org/10.17796/1053-4628-41.5.374>.
- [11] Nik NN, Abul Rahman R. Pre-eruptive intra-coronal dentine defects of permanent teeth. *J Clin Pediatr Dent.* 2003; 27 (4): 371–5.
- [12] Gurdán Z, Balázs D, Pásti D, Fathi M, Maróti P, Kardos K, Pacheco A, Szalma J. Pre-eruptive intracoronale resorption in orthodontic patients: A retrospective analysis of 3,143 patients. *Heliyon.* 2023; 9 (8): e18699. doi: 10.1016/j.heliyon.2023.e18699. PMID: 37560674; PMCID: PMC10407135.
- [13] Seow WK, Hackley D. Pre-eruptive resorption of dentine in the primary and permanent dentitions: case reports and literature review. *Pediatr Dent.* 1996; 18 (1): 67–71.
- [14] Schwimmer Y, Zeltser R, Moskovitz M. Deep caries due to Pre-eruptive intra-coronal resorption in a newly erupted primary molar. *Int J Paediatr Dent.* 2017. <https://doi.org/10.1111/ipd.12283>.

- [15] Grundy GE, Pyle RJ, Adkins KF. Intra-coronal resorption of unerupted molars. *Aust Dent J*. 1984; 29 (3): 175–9.
- [16] Manan NM, Mallineni SK, King NM. Idiopathic pre-eruptive coronal resorption of a maxillary permanent canine. *Eur Arch Paediatr Dent*. 2012; 13 (2): 98–101.
- [17] Yamada MKM, Taguchi Y, Watanabe J, Noda T. Preeruptive intracoronal radiolucency caused by resorption: report of a case. *Eur J Pediatr Dent*. 2001; 2: 79–82.
- [18] Wong L, Khan S. Occult caries or pre-eruptive intracoronal resorption? A chance finding on a radiograph. *Pediatr Dent*. 2014; 36 (5): 429–32. PMID: 25303513.
- [19] Klambani M, Lussi A, Ruf S. Radiolucent lesion of an unerupted mandibular molar. *Am J Orthod Dentofac Orthop*. 2005; 127 (1): 67–71. <https://doi.org/10.1016/j.ajodo.2004.01.020>
- [20] Grundy GE, Pyle RJ, Adkins KF. Intra-coronal resorption of unerupted molars. *Aust Dent J*. 1984; 29 (3): 175–9.
- [21] Rankow H, Croll TP, Miller AS. Pre-eruptive idiopathic coronal resorption of permanent teeth in children. *J Endod*. 1986; 12 (1): 36–9. [https://doi.org/10.1016/S0099-2399\(86\)80280-1](https://doi.org/10.1016/S0099-2399(86)80280-1).
- [22] Spierer WA, Fuks AB. Pre-eruptive intra-coronal resorption: controversies and treatment options. *J Clin Pediatr Dent*. 2014; 38: 326e8.
- [23] Le VNT, Kim JG, Yang YM, Lee DW. Treatment of pre-eruptive intracoronal resorption: A systematic review and case report. *J Dent Sci*. 2020; 15 (3): 373–382. doi: 10.1016/j.jds.2020.02.001. Epub 2020 Mar 18. PMID: 32952895; PMCID: PMC7486503.
- [24] Chouchene F, Hammami W, Ghedira A, Masmoudi F, Baaziz A, Fethi M, Ghedira H. Treatment of pre-eruptive intracoronal resorption: A scoping review. *Eur J Paediatr Dent*. 2020; 21 (3): 227–234. doi: 10.23804/ejpd.2020.21.03.13. PMID: 32893657.
- [25] Christine Kirchmann. Zufallsbefund: präeruptive intrakoronale Resorption. *zm online*. 23.05.2017 <https://www.zm-online.de/news/detail/zufallsbefund-praeeruptive-intrakoronale-resorption>
- [26] Counihan KP, O'Connell AC. Case report: pre-eruptive intra-coronal radiolucencies revisited. *Eur Arch Paediatr Dent*. 2012; 13 (4): 221–6.
- [27] Czarnecki G, Morrow M, Peters M, Hu J. Pre-eruptive intracoronal resorption of a permanent first molar. *J Dent Child*. 2014; 81 (3): 151–5.
- [28] Manmontri C, Mahasantipiya PM, Chompu-inwai P. Preeruptive Intracoronal Radiolucencies : Detection and Nine Years Monitoring with a Series of Dental Radiographs. *Case Rep Dent*. 2017; 2017: 6261407.
- [29] Ilha MC, Kramer PF, Ferreira SH, Ruschel HC. Pre-eruptive Intracoronal Radiolucency in First Permanent Molar. *Int J ClinPediatr Dent*. 2018; 11 (2): 151–4.
- [30] Moura, Bianca & Silveira, Gustavo & Rodrigues-Junior, Sinval. Diagnosis and clinical management of pre-eruptive intracoronal resorption – a case report. *Revista Sul Brasileira de Odontologia*. 2016; 13. 109. 10.21726/rsbo.v13i2.280.
- [31] Skaf DM, Dilzell WW. Lesions resembling caries in unerupted teeth. *Oral Surg Oral Med Oral Pathol*. 1978; 45 (4): 643–6.
- [32] Counihan KP, O'Connell AC. Case report: pre-eruptive intra-coronal radiolucencies revisited. *Eur Arch Paediatr Dent*. 2012; 13 (4): 221–6.
- [33] Brunet-Llobet L, Lahor-Soler E, Miranda-Rius J. Oral pain due to severe pre-eruptive intracoronal resorption in permanent tooth. *Eur J Paediatr Dent*. 2014; 15 (1): 332–4.
- [34] Wong L, Khan S. Occult caries or pre-eruptive intracoronal resorption? A chance finding on a radiograph. *Pediatr Dent*. 2014; 36 (5): 429–32.

- [35] Yang S, Kim J, Choi N, Kim S. Management of Infected Immature Permanent Tooth with Pre-eruptive Intracoronar Resorption: Two Case Reports. *J Korean AcadPediatr Dent.* 2017; 44 (2): 220–7.
- [36] Swaiat M, Faus-Matoses I, Zubizarreta-Macho Á, Ashkar I, Faus-Matoses V, Bellot-Arcís C, Iranzo-Cortés JE, Montiel-Company JM. Is Revascularization the Treatment of Choice for Traumatized Necrotic Immature Teeth? A Systematic Review and Meta-Analysis. *J. Clin Med.* 2023; 12: 2656. <https://doi.org/10.3390/jcm12072656>.
- [37] Chisini, Luiz & Grazioli, Guillermo & Francia, Alejandro & Schmidt San Martin, Alissa & Demarco, Flavio & Conde, Marcus. Revascularization versus apical barrier technique with mineral trioxide aggregate plug: A systematic review. *Giornale Italiano di Endodonzia* 2018.
- [38] Holan G, Eidelman E, Mass E. Pre-eruptive coronal resorption of permanent teeth: report of three cases and their treatments. *Pediatr Dent.* 1994; 16 (5): 373–7.

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Dr. Miriam Cyris, Prof. Dr. Christian Graetz, Dr. Antje Geiken

Prophylaxe im Kinder- und Jugendgebiss – Hokusfokus oder wie verschwinden Plaque & Co?

1. Chapple, I.L.C., et al., Periodontal health and gingival diseases and conditions on an intact and a reduced periodontium: Consensus report of workgroup 1 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions. *J Clin Periodontol*, 2018. **45 Suppl 20**: p. S68-S77.
2. Axelsson, P., B. Nystrom, and J. Lindhe, 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): p. 749-57.
3. van der Weijden, F. and D.E. Slot, Oral hygiene in the prevention of periodontal diseases: the evidence. *Periodontol* 2000, 2011. **55**(1): p. 104-23.
4. Plagmann, H.C., Grundprinzipien der Bearbeitung von Wurzeloberflächen mit Universalküretten und Spezialküretten, ed. H.C.H. Plagmann. 1998, München, Wien: Hanser.
5. Lea, S.C., G. Landini, and A.D. Walmsley, Vibration characteristics of ultrasonic scalers assessed with scanning laser vibrometry. *J Dent*, 2002. **30**(4): p. 147-51.
6. Lea, S.C., et al., Three-dimensional analyses of ultrasonic scaler oscillations. *J Clin Periodontol*, 2009. **36**(1): p. 44-50.
7. Graetz, C., et al., Removal of simulated biofilm: a preclinical ergonomic comparison of instruments and operators. *Clin Oral Investig*, 2016. **20**(6): p. 1193-201.
8. Van der Sluijs, M., et al., The effect on clinical parameters of periodontal inflammation following non-surgical periodontal therapy with ultrasonics and chemotherapeutic cooling solutions: a systematic review. *J Clin Periodontol*, 2016. **43**(12): p. 1074-1085.
9. Flemmig, T.F., et al., Working parameters of a sonic scaler influencing root substance removal in vitro. *Clin Oral Investig*, 1997. **1**(2): p. 55-60.
10. Graetz, C.B., A.; Dörfer, C. E., Instrumentierung der Wurzeloberfläche im Rahmen der Parodontitistherapie. *Quintessenz* 2017. **68**.

11. Karacaoglu, F. and K. Orhan, Comparison of the effects of different instrumentation techniques on root surface roughness and cement loss using micro-computerized tomography: An in-vitro study. *Int J Dent Hyg*, 2022. **20**(2): p. 339-346.
12. Sculean, A., et al., A paradigm shift in mechanical biofilm management? Subgingival air polishing: a new way to improve mechanical biofilm management in the dental practice. *Quintessence Int*, 2013. **44**(7): p. 475-7.
13. Sanz, M., et al., Treatment of stage I-III periodontitis-The EFP S3 level clinical practice guideline. *J Clin Periodontol*, 2020. **47 Suppl 22**: p. 4-60.

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MIH und Hypersensibilitäten – Optionen in der Initialtherapie unter Berücksichtigung mittel- und langfristiger Optionen

1. Bekes K, editor. *Molar Incisor Hypomineralization*. Cham: Springer International Publishing; 2020.
2. Kühnisch J, Mach D, Thiering E, Brockow I, Hoffmann U, Neumann C, et al. Respiratory diseases are associated with molar-incisor hypomineralizations. *Swiss Dent J*. 2014;124:286–93.
3. Lygidakis NA, Garot E, Somani C, Taylor GD, Rouas P, Wong FSL. Best clinical practice guidance for clinicians dealing with children presenting with molar-incisor-hypomineralisation (MIH): an updated European Academy of Paediatric Dentistry policy document. *Eur Arch Paediatr Dent*. 2022;23:3–21. doi:10.1007/s40368-021-00668-5.
4. Lygidakis NA, Wong F, Jälevik B, Vierrou A-M, Alaluusua S, Espelid I. Best Clinical Practice Guidance for clinicians dealing with children presenting with Molar-Incisor-Hypomineralisation (MIH): An EAPD Policy Document. *Eur Arch Paediatr Dent*. 2010;11:75–81. doi:10.1007/BF03262716.
5. Crombie FA, Manton DJ, Palamara JEA, Zalazniak I, Cochrane NJ, Reynolds EC. Characterisation of developmentally hypomineralised human enamel. *J Dent*. 2013;41:611–8. doi:10.1016/j.jdent.2013.05.002.
6. Petrou MA, Giraki M, Bissar A-R, Wempe C, Schäfer M, Schiffner U, et al. Severity of MIH findings at tooth surface level among German school children. *Eur Arch Paediatr Dent*. 2015;16:271–6. doi:10.1007/s40368-015-0176-x.
7. Martinović B, Ivanović M, Milojković Z, Mladenović R. Analysis of the mineral composition of hypomineralized first permanent molars. *Vojnosanit Pregl*. 2015;72:864–9.
8. Raposo F, Carvalho Rodrigues AC de, Lia ÉN, Leal SC. Prevalence of Hypersensitivity in Teeth Affected by Molar-Incisor Hypomineralization (MIH). *caries research*. 2019;53:424–30. doi:10.1159/000495848.
9. Ghanim A, Elfrink M, Weerheijm K, Mariño R, Manton D. A practical method for use in epidemiological studies on enamel hypomineralisation. *Eur Arch Paediatr Dent*. 2015;16:235–46. doi:10.1007/s40368-015-0178-8.

10. Oreano MD'a, Santos PS, Borgatto AF, Bolan M, Cardoso M. Association between dental caries and molar-incisor hypomineralisation in first permanent molars: A hierarchical model. *Community Dent Oral Epidemiol.* 2023;51:436–42. doi:10.1111/cdoe.12778.
11. Steffen R, Krämer N, Bekes K. The Würzburg MIH concept: the MIH treatment need index (MIH TNI) : A new index to assess and plan treatment in patients with molar incisor hypomineralisation (MIH). *Eur Arch Paediatr Dent.* 2017;18:355–61. doi:10.1007/s40368-017-0301-0.
12. Awwad A, Hamad R, Schiffner U, Splieth CH, Schmoeckel J. Effect of Prevalence and Severity of Molar-Incisor Hypomineralization on Oral Health-Related Quality of Life: A Systematic Review and Meta-Analysis. *Acta Stomatol Croat.* 2023;57:381–94. doi:10.15644/asc57/4/8.
13. Joshi T. Effect of Molar Incisor Hypomineralisation on Oral Health Related Quality of Life in Children; 2021.
14. Bekes K, Steffen R, Krämer N. Update of the molar incisor hypomineralization: Würzburg concept. *Eur Arch Paediatr Dent.* 2023;24:807–13. doi:10.1007/s40368-023-00848-5.
15. Splieth CH. *Kinderzahnheilkunde in der Praxis.* 2nd ed. Berlin: Quintessenz Verlags-GmbH; 2024.
16. Bekes K, Amend S, Priller J, Zamek C, Stamm T, Krämer N. Hypersensitivity relief of MIH-affected molars using two sealing techniques: a 12-week follow-up. *Clin Oral Investig.* 2022;26:1879–88. doi:10.1007/s00784-021-04163-5.
17. Krämer N, Bui Khac N-HN, Lückner S, Stachniss V, Frankenberger R. Bonding strategies for MIH-affected enamel and dentin. *Dent Mater.* 2018;34:331–40. doi:10.1016/j.dental.2017.11.015.
18. Ahmed W, Splieth CH, Schmoeckel J. Parental satisfaction and children's acceptance immediately after application of silver-fluoride/potassium-iodide for hypersensitive MIH-molars in schoolchildren. *caries research.* 2024;58:184–386. doi:10.1159/000539768.
19. Bekes K, Heinzelmann K, Lettner S, Schaller H-G. Efficacy of desensitizing products containing 8% arginine and calcium carbonate for hypersensitivity relief in MIH-affected molars: an 8-week clinical study. *Clin Oral Investig.* 2017;21:2311–7. doi:10.1007/s00784-016-2024-8.
20. Pasini M, Giuca MR, Scatena M, Gatto R, Caruso S. Molar incisor hypomineralization treatment with casein phosphopeptide and amorphous calcium phosphate in children. *Minerva Stomatol.* 2018;67:20–5. doi:10.23736/S0026-4970.17.04086-9.
21. Baroni C, Marchionni S. MIH supplementation strategies: prospective clinical and laboratory trial. *J Dent Res.* 2011;90:371–6. doi:10.1177/0022034510388036.
22. Ehlers V, Reuter AK, Kehl E-B, Enax J, Meyer F, Schlecht J, et al. Efficacy of a Toothpaste Based on Microcrystalline Hydroxyapatite on Children with Hypersensitivity Caused by MIH: A Randomised Controlled Trial. *Oral Health Prev Dent.* 2021;19:647–58. doi:10.3290/j.ohpd.b2403649.
23. Fütterer J, Ebel M, Bekes K, Klode C, Hirsch C. Influence of customized therapy for molar incisor hypomineralization on children's oral hygiene and quality of life. *Clin Exp Dent Res.* 2020;6:33–43. doi:10.1002/cre2.245.
24. Steffen R, van Waes H. Die Behandlung von Kindern mit Molaren-Inzisiven-Hypomineralisation. Eine Herausforderung bei der Schmerzkontrolle und Verhaltenssteuerung. *Quintessenz.* 2011:1585–92.
25. Elger W, Illge C, Kiess W, Körner A, Kratzsch J, Schrock A, Hirsch C. Relationship between deciduous molar hypomineralisation and parameters of bone metabolism in preschool children. *Int Dent J.* 2020;70:303–7. doi:10.1111/idj.12550.

26. Estivals J, Fahd C, Baillet J, Rouas P, Manton DJ, Garot E. The prevalence and characteristics of and the association between MIH and HSPM in South-Western France. *Int J Paediatr Dent*. 2023;33:298–304. doi:10.1111/ipd.13040.
27. Declerck D, Mampay E. Non-invasive treatment approach for hypomineralised second primary molars using preformed metal crowns: results after 1-year follow-up. *Eur Arch Paediatr Dent*. 2021;22:479–90. doi:10.1007/s40368-020-00585-z.

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Dr. Darius Moghtader

Das verkürzte Lippenbändchen ein Stillhindernis?

- [1] Carnino JM, Walia AS, Lara FR, Mwaura AM, Levi JR. The effect of frenectomy for tongue-tie, lip-tie, or cheek-tie on breastfeeding outcomes: A systematic review of articles over time and suggestions for management. *Int J Pediatr Otorhinolaryngol*. 2023 Aug; 171:111638. doi: 10.1016/j.ijporl.2023.111638. Epub 2023 Jun 17. PMID: 37352592.
- [2] Freeman CG, Ohlstein JF, Rossi NA, McIntire JB, Neve LD, Daram S, Pine HS. Labial Frenotomy for Symptomatic Isolated Upper Lip Tie. *Cureus*. 2022 Dec 20;14(12): e32755. doi: 10.7759/cureus.32755. PMID: 36686132; PMCID: PMC9851728.
- [3] Ghaheri. The difference between a lip tie and a normal labial frenulum. <https://www.drghaheri.com/blog/2014/10/8/the-difference-between-a-lip-tie-and-a-normal-frenulum>; October 9 2014.
- [4] Ghaheri BA, Cole M, Fausel SC, Chuop M, Mace JC. Breastfeeding improvement following tongue-tie and lip-tie release: A prospective cohort study. *Laryngoscope*. 2017 May;127(5):1217-1223. doi: 10.1002/lary.26306. Epub 2016 Sep 19. PMID: 27641715; PMCID: PMC5516187.
- [5] Heo W, Ahn HC. Oberlippenband, das sich in den harten Gaumen und den vorderen Prämaxilla wickelt und eine Alveolarhypoplasie verursacht. *Arch Craniofac Surg*. 2018 Mar;19(1):48-50. doi: 10.7181/acfs.2018.19.1.48. Epub 2018 Mar 20. PMID: 29609432; PMCID: PMC5894555.
- [6] Ghaheri BA, Lincoln D, Mai TNT, Mace JC. Objective Improvement After Frenotomy for Posterior Tongue-Tie: A Prospective Randomized Trial. *Otolaryngol Head Neck Surg*. 2021 Sep 7:1945998211039784.
- [7] Iwanaga J, He P, Fukino K, Hur MS, Kim HJ, Han A, Watanabe K, Ibaragi S, Kitagawa N, Tubbs RS. What is a superior labial frenulum? An anatomical and histological study. *Clin Anat*. 2023 Jan;36(1):161-169. doi: 10.1002/ca.23973. Epub 2022 Nov 11. PMID: 36336971.
- [8] Moghtader D: Frenotomie des Frenulum linguae beim Säugling mit Ankyloglossie. *Laktation & Stillen* 2019; 3:20-28.
- [9] Nakhsh R, Wasserteil N, Mimouni FB, Kasirer YM, Hammerman C, Bin-Nun A. Upper Lip Tie and Breastfeeding: A Systematic Review. *Breastfeed Med*. 2019 Mar;14(2):83-87. doi: 10.1089/bfm.2018.0174. Epub 2019 Jan 25. PMID: 30681376.
- [10] Patel PS, Wu DB, Schwartz Z, Rosenfeld RM. Upper lip frenotomy for neonatal breastfeeding problems. *Int J Pediatr Otorhinolaryngol*. 2019 Sep; 124:190-192. doi: 10.1016/j.ijporl.2019.06.008. Epub 2019 Jun 10. PMID: 31202037.

- [11] Shah S, Allen P, Walker R, Rosen-Carole C, McKenna Benoit MK. Upper Lip Tie: Anatomy, Effect on Breastfeeding, and Correlation with Ankyloglossia. *Laryngoscope*. 2021 May;131(5): E1701-E1706. doi: 10.1002/lary.29140. Epub 2020 Oct 2. PMID: 33006413.
- [12] Towfighi P, Johng SY, Lally MM, Harley EH. A Retrospective Cohort Study of the Impact of Upper Lip Tie Release on Breastfeeding in Infants. *Breastfeed Med*. 2022 May;17(5):446-452. doi: 10.1089/bfm.2021.0140. Epub 2022 Mar 2. PMID: 35235369.

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Osseointegration von Implantaten bei unterschiedlichen Medikamenten

- [1] United Nations. *World Population Prospects: The 2017 Revision*. 2017; Available from: <https://www.un.org/development/desa/publications/world-population-prospects-the-2017-revision.html>.
- [2] Moßhammer, D., et al., *Polypharmazie – Tendenz steigend, Folgen schwer kalkulierbar, Polypharmacy—an upward trend with unpredictable effects*. *Dtsch Arztebl Int* 2016. 113(38): p. 627-33.
- [3] Laroche, M.L., et al., *Inappropriate medications in the elderly*. *Clin Pharmacol Ther*, 2009. 85(1): p. 94-7.
- [4] Kuramatsu, J.B., et al., *Anticoagulant reversal, blood pressure levels, and anticoagulant resumption in patients with anticoagulation-related intracerebral hemorrhage*. *JAMA*, 2015. 313(8): p. 824-36.
- [5] Kämmerer, P.W. and B. Al-Nawas, *Zahnärztliche Chirurgie unter oraler Antikoagulation/Thrombozytenaggregationshemmung - S3-Leitlinie (Langversion) AWMF-Registernummer: 083-018 DGZMK DGMKG 2017*.
- [6] Kunkel, M., *(Nach)Bluten oder Sterben? – Das Ende eines Mythos in der Antikoagulation*. *MKG-Chirurg*, 2016. 9: p. 286–288.
- [7] Wolff, T.F. and K.A. Groetz. *Der Umgang mit antikoagulierten Patienten*. ZMK 2019; Available from: https://www.zmk-aktuell.de/fachgebiete/allgemeine-zahnheilkunde/story/der-umgang-mit-antikoagulierten-patienten__7910.html.
- [8] Schiegnitz, E. and K.A. Groetz, *AGSMO-Laufzettel empfohlen durch die S3-Leitlinie AR-ONJ (007-091; www.awmf.de), www.agsmo.de oder www.onkosupport.de*. AGSMO.
- [9] Schiegnitz, E., et al., *S3-Leitlinie: Antiresorptiva-assoziierte Kiefernekrosen (AR-ONJ)*. AWMF 007-091, 2018.
- [10] Chappuis, V., et al., *Medication-related dental implant failure: Systematic review and meta-analysis*. *Clin Oral Implants Res*, 2018. 29 Suppl 16: p. 55-68.
- [11] Luo, J.D., et al., *The effect of non-steroidal anti-inflammatory drugs on the osteogenic activity in osseointegration: a systematic review*. *Int J Implant Dent*, 2018. 4(1): p. 30.
- [12] Koch, R. *Epidemiologisches Bulletin, aktuelle daten und informationen zu infektionskrankheiten und public health*. 2 2015; Available from: https://www.rki.de/DE/Content/Infekt/EpidBull/Archiv/2015/Ausgaben/05_15.pdf;jsessionid=26F7BFA92A8B5DE3419FAF7F266086EB.2_cid363?__blob=publicationFile.
- [13] Perez-Castrillon, J.L., et al., *Effect of the antihypertensive treatment on the bone mineral density and osteoporotic fracture*. *Curr Hypertens Rev* 2005(1): p. 61–66.

- [14] Pierroz, D.D., et al., *Deletion of beta-adrenergic receptor 1, 2, or both leads to different bone phenotypes and response to mechanical stimulation*. J Bone Miner Res, 2012. 27(6): p. 1252-62.
- [15] Schlienger, R.G., et al., *Use of beta-blockers and risk of fractures*. JAMA, 2004. 292(11): p. 1326-32.
- [16] Wu, X., et al., *Antihypertensive Medications and the Survival Rate of Osseointegrated Dental Implants: A Cohort Study*. Clin Implant Dent Relat Res, 2016. 18(6): p. 1171-1182.
- [17] Mishra, S.K., N.K. Sonnahalli, and R. Chowdhary, *Do antihypertensive medications have an effect on dental implants? A systematic review*. Oral Maxillofac Surg, 2023.
- [18] De Bruyne, P., et al., *Changes in prescription patterns of acid-suppressant medications by Belgian pediatricians: analysis of the national database, [1997-2009]*. J Pediatr Gastroenterol Nutr, 2014. 58(2): p. 220-5.
- [19] Mazer-Amirshahi, M., et al., *Rising rates of proton pump inhibitor prescribing in US emergency departments*. Am J Emerg Med, 2014. 32(6): p. 618-22.
- [20] Targownik, L.E., et al., *Use of proton pump inhibitors and risk of osteoporosis-related fractures*. CMAJ, 2008. 179(4): p. 319-26.
- [21] O'Connell, M.B., et al., *Effects of proton pump inhibitors on calcium carbonate absorption in women: a randomized crossover trial*. Am J Med, 2005. 118(7): p. 778-81.
- [22] Wu, X., et al., *Proton Pump Inhibitors and the Risk of Osseointegrated Dental Implant Failure: A Cohort Study*. Clin Implant Dent Relat Res, 2017. 19(2): p. 222-232.
- [23] Chrcanovic, B.R., et al., *Intake of Proton Pump Inhibitors Is Associated with an Increased Risk of Dental Implant Failure*. Int J Oral Maxillofac Implants, 2017. 32(5): p. 1097-1102.
- [24] Haney, E.M., et al., *Association of low bone mineral density with selective serotonin reuptake inhibitor use by older men*. Arch Intern Med, 2007. 167(12): p. 1246-51.
- [25] Carr, A.B., et al., *Relationship between Selective Serotonin Reuptake Inhibitors and Risk of Dental Implant Failure*. J Prosthodont, 2019.
- [26] Chrcanovic, B.R., et al., *Is the intake of selective serotonin reuptake inhibitors associated with an increased risk of dental implant failure? Int J Oral Maxillofac Surg*, 2017.
- [27] Bera, R.N., et al., *Implant survival in patients with neuropsychiatric, neurocognitive, and neurodegenerative disorders: A meta-analysis*. Natl J Maxillofac Surg, 2021. 12(2): p. 162-170.
- [28] Chandra, P., et al., *Role of Selective Serotonin Reuptake Inhibitors in Prognosis Dental Implants: A Retrospective Study*. J Pharm Bioallied Sci, 2021. 13(Suppl 1): p. S92-S96.

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Strukturerhalt nach Frontzahnimplantat infolge einer Kronenfraktur

Das Bone Growth Konzept beim älteren Patienten/-innen

- [1] Boardman N, Darby I, Chen S. A retrospective evaluation of aesthetic outcomes for single-tooth implants in the anterior maxilla. Clin Oral Implants Res. 2016; 27: 443–451.
- [2] Crespi R, Cappare P, Gherlone E. Immediate loading of dental implants placed in periodontally infected and noninfected sites: a 4-year follow-up clinical study. J Periodontol. 2010; 81: 1140–1146.

- [3] De Baat C. Success of dental implants in elderly people – a literature review. *Gerodontology* 2000; 17 (1): 45-48.
- [4] DGI, DGZMK. Implantationszeitpunkte Langfassung, Version 1.0, 2022, AWMF Registriernummer: 083-040, <https://www.awmf.org/leitlinien/detail/II/083-040.html>, (Zugriff am: 22.02.2024).
- [5] Esposito M, Grusovin MG, Maghaireh H, Worthington HV. Interventions for replacing missing teeth: different times for loading dental implants. *Cochrane Database Syst Rev.* 2013; CD003878.26.
- [6] Fickl S, Wirsching E, Krug R. Resektive Therapie nach Kronen-Wurzel-Fraktur, *Parodontologie* 2020; 03: 275-285.
- [7] Grande. Gemeinsam entscheiden. *Zahnärztl Mitteil*, 2014; 14 A: 34–38.
- [8] Groß D. Ethische Fragen in der Zahnheilkunde; III Zahnärztliche Kommunikation in ethischer Sicht. Vorlesungsskript vom 02.11.2015.
- [9] Herklotz I, Beuer F, Kunz A, Hildebrand D, Happe A. Navigation in implantology. *Int J Comput Dent.* 2017; 20: 9–19.
- [10] Hürzeler M, Zuhr O. Plastisch-Ästhetische Parodontal- und Implantatchirurgie. Quintessence Publishing, Berlin 2011.
- [11] Muller F, Duvernay E, Loup A et al. Implant-supported mandibular overdentures in very old adults: a randomized controlled trial. *J Dent Res.* 2013; 92 (Suppl 12): 154S 160S.
- [12] Neugebauer J, Kistler S, Frank IK, Kistler F, Dhom G. Crestale Knochenneubildung durch ein Konzept des mikrostrukturierten Backtapers: BDIZ Konkret 2022; 04: 54-57.
- [13] Rojo-Sanchis J, Soto-Peñaloza D, Peñarrocha-Oltra D, Peñarrocha-Diago M, Viña Almunia J. Facial alveolar bone thickness and modifying factors of anterior maxillary teeth: a systematic review and meta-analysis of cone-beam computed tomography studies. *BMC Oral Health.* 2021; 21 (1): 143.
- [14] Truninger TC, Philipp AO, Siegenthaler DW, Roos M, Hammerle CH, Jung RE. A prospective, controlled clinical trial evaluating the clinical and radiological outcome after 3 years of immediately placed implants in sockets exhibiting periapical pathology. *Clin Oral Implants Res.* 2011; 22: 20–27.
- [15] Zöller JE, Neugebauer J. Digitale Volumetomografie in der Zahn-, Mund- und Kieferheilkunde. Grundlagen, Diagnostik und Behandlungsplanung. Quintessenz, Berlin 2013.

ZMK 2024; 40 (11-12) 677-679

Dr. Desigar Moodley

Minimalinvasive Restauration mit Ceramir-Kinderkronen

1. Threlfall AG, Pilkington L, Milsom KM, Blinkhorn AS, Tickle M. General Dental practitioners' views on the use of stainless steel crowns to restore primary molars. *Br Dent J.* 2005;199(7):453-455. doi:10.1038/sj.bdj.4812746
2. Lee J-H. Guided tooth preparation for a pediatric zirconia crown. *J Am Dent Assoc.* 2018;149(3):202-208.e2. doi:10.1016/J.ADAJ.2017.08.048
3. Edelweiss Dentistry. Breakthrough in Pediatric Dentistry. Brochure. <http://www.edelweiss-dentistry.com/en/products/system/pediatriccrown#tab1>. Veröffentlicht 2023. Abgerufen am 25. März 2024.

4. Lourenço Neto n, Cardoso Cab, Abdo rcc, Silva smb da. Oral rehabilitation in pediatric dentistry: a clinical case report. RGO - Rev Gaúcha Odontol. 2016;64(1):87-92. doi:10.1590/1981-863720160001000131064
5. Shim Y-S, An S-Y. Esthetic Restoration of Deciduous Teeth Using Prefabricated Zirconia Crown in Children with Early Childhood Caries: A Report of Three Cases. J Dent Hyg Sci. 2018;18(3):194-200. doi:10.17135/jdhs.2018.18.3.194
6. Townsend JA, Knoell P, Yu Q, et al. In Vitro Fracture Resistance of Three Commercially Available Zirconia Crowns for Primary Molars. Pediatr Dent. 2014;36(5):125-129. doi:10.1016/0090-4295(93)90521-B

ZMK 2024; 40 (11-12) 681-683

Prof. Dr. Stefan Zimmer

Evidenzbasierte Empfehlungen zur täglichen Mundpflege

- [1] Glenny AM, Walsh T, Iwasaki M, Kateeb E, Braga MM, Riley P, Melo P. "Development of Tooth Brushing Recommendations Through Professional Consensus." Int Dent J. 2023 Dec 4:S0020-6539(23)00963-2.
- [2] Fernández, Constanza E et al. "Should We Wait to Brush Our Teeth? A Scoping Review Regarding Dental Caries and Erosive Tooth Wear." Caries research, 1-14. 17 Apr. 2024
- [3] Mathiesen AT, Ögaard B, Rølla G. Oral hygiene as a variable in dental caries experience in 14-year-olds exposed to fluoride. Caries Res. 1996;30:29-33.
- [4] Hong, Deng-Wei et al. "Does delayed toothbrushing after the consumption of erosive foodstuffs or beverages decrease erosive tooth wear? A systematic review and meta-analysis." Clinical oral investigations vol. 24,12 (2020): 4169-4183.
- [5] Alex Simon Chan, Theresa Thien Kim Tran, Yi Hsuan Hsu, Stephanie Yue Sum Liu, Jeroen Kroon: A systematic review of dietary acids and habits on dental erosion in adolescents. Int J Paediatr Dent. 2020 Nov;30(6):713-733.
- [6] Johansson A-K, Lingström P, Imfeld T, Birkhed D. Influence of drinking method on tooth-surface pH in relation to dental erosion. Eur J Oral Sci. 2004;112:484-9.
- [7] Hawkins BF, Kohout FJ, Lainson PA, Heckert A. Duration of toothbrushing for effective plaque control. Quintessence Int. 1986;17:361-5.
- [8] PETZOLD, D., and C. FINKE. "Wie werden elektrische Zahnbürsten von Klein- und Vorschulkindern akzeptiert." Prophylaxe-Impuls 5 (2001): 58.
- [9] Purushotham, Pooja Mysore et al. "Comparison of the efficacy of parental brushing using powered versus manual tooth brush: A randomized, four-period, two-treatment, single-blinded crossover study." Journal of the Indian Society of Pedodontics and Preventive Dentistry vol. 39,1 (2021): 95-100.
- [10] Yaacob M et al. Powered versus manual toothbrushing for oral health. Cochrane Database of Systematic Reviews 2014, Issue 6. Art. No.:CD002281.
- [11] Zimmer, S et al. "Clinical study of the effectiveness of two sonic toothbrushes." The Journal of clinical dentistry vol. 11,1 (2000): 24-7.
- [12] Zimmer, Stefan et al. "Cleaning efficacy and soft tissue trauma after use of manual toothbrushes with different bristle stiffness." Journal of periodontology vol. 82,2 (2011): 267-71.

- [13] Bizhang, Mozhgan et al. "Influence of Bristle Stiffness of Manual Toothbrushes on Eroded and Sound Human Dentin--An In Vitro Study." PloS one vol. 11,4 e0153250. 12 Apr. 2016,
- [14] Berg, Bettina, et al. "Kariesprävention im Säuglings-und frühen Kindesalter." Monatsschrift Kinderheilkunde 169.6 (2021): 550-558.
- [15] Machiulskiene V, Richards A, Nyvad B, Baelum V. Prospective study of the effect of post-brushing rinsing behaviour on dental caries. Caries Res. 2002;36(5):301-7.
- [16] Marinho VC, Chong LY, Worthington HV, Walsh T. Fluoride mouthrinses for preventing dental caries in children and adolescents. Cochrane Database Syst Rev. 2016;7:CD002284.
- [17] Mazhari, Fatemeh et al. "The effect of toothbrushing and flossing sequence on interdental plaque reduction and fluoride retention: A randomized controlled clinical trial." Journal of periodontology vol. 89,7 (2018): 824-832.

ZMK 2024; 40 (11-12) 684-685

Sieger in der Prophylaxe: Das GBT-Erlebnis

1. 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://www.ncbi.nlm.nih.gov/pubmed/15312097>
2. Tonetti MS, Chapple IL, Jepsen S, et al. Primary and secondary prevention of periodontal and peri-implant diseases: Introduction to, and objectives of the 11th European Workshop on Periodontology consensus conference. J Clin Periodontol. 2015;42 Suppl 16:S1-4.
<https://www.ncbi.nlm.nih.gov/pubmed/25683242>
3. Herrera D, Sanz M, Shapira L, et al. Periodontal diseases and cardiovascular diseases, diabetes, and respiratory diseases: Summary of the consensus report by the European Federation of Periodontology and WONCA Europe. Eur J Gen Pract. 2024;30(1):2320120. Epub 20240321. <https://www.ncbi.nlm.nih.gov/pubmed/38511739>
4. Amerio E, Mainas G, Petrova D, et al. Compliance with supportive periodontal/peri-implant therapy: A systematic review. Journal of Clinical Periodontology. 2020;47(1):81-100.
<https://www.ncbi.nlm.nih.gov/pubmed/31562778>
5. Enkling N, Marwinski G, Jöhren P. Dental anxiety in a representative sample of residents of a large German city. Clin Oral Investig. 2006;10(1):84-91. Epub 20060214.
<https://www.ncbi.nlm.nih.gov/pubmed/16477408>
6. Bastendorf K, Straßfeld-Bastendorf N. Auf das klinische Protokoll kommt es an – PZR, UPT und GBT. Quintessenz. 2020;71(12):1380-9. <https://www.quintessence-publishing.com/deu/de/article/867027/quintessenz-zahnmedizin/2020/12/auf-das-klinische-protokoll-kommt-es-an-pzr-upt-und-gbt>
7. Lang N, A. L, KD. B. Wissenschaftlicher Konsensus Guided Biofilm Therapy-Protokoll. Ein neues Konzept für die primäre und sekundäre Prävention. 2019.
8. Camboni S, Donnet M. Tooth Surface Comparison after Air Polishing and Rubber Cup: A Scanning Electron Microscopy Study. J Clin Dent. 2016;27(1):13-8. Epub 2017/04/09.
<https://www.ncbi.nlm.nih.gov/pubmed/28390211>

9. Graetz C, Plaumann A, Wittich R, et al. Removal of simulated biofilm: an evaluation of the effect on root surfaces roughness after scaling. Clin Oral Investig. 2016.
<https://www.ncbi.nlm.nih.gov/pubmed/27233902>
<https://link.springer.com/content/pdf/10.1007/s00784-016-1861-9.pdf>
10. 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 20200526. <https://www.ncbi.nlm.nih.gov/pubmed/32348624>
11. 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>
12. Buhler 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>
13. Aslund M, Suvan J, Moles DR, et al. Effects of two different methods of non-surgical periodontal therapy on patient perception of pain and quality of life: a randomized controlled clinical trial. J Periodontol. 2008;79(6):1031-40.
<https://www.ncbi.nlm.nih.gov/pubmed/18533780>
14. Kruse AB, Fortmeier S, Vach K, et al. Impact of air-polishing using erythritol on surface roughness and substance loss in dental hard tissue: An ex vivo study. PLoS One. 2024;19(2):e0286672. Epub 20240226. <https://www.ncbi.nlm.nih.gov/pubmed/38408064>
15. Dong H, Barr A, Loomer P, et al. The effects of periodontal instrument handle design on hand muscle load and pinch force. J Am Dent Assoc. 2006;137(8):1123-30; quiz 70. Epub 2006/07/29. <https://www.ncbi.nlm.nih.gov/pubmed/16873329>
16. 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/>