

Minimalinvasives Kariesmanagement bei Kindern

Muss es immer die Füllung sein?

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Literaturangabe

- [1] Ahovuo-Saloranta A, Forss H, Walsh T, Nordblad A, Mäkelä M, Worthington HV: Pit and fissure sealants for preventing dental decay in permanent teeth. *Cochrane Database Syst Rev* 2017; 7:CD001830.
- [2] Alkilzy M, Berndt C, Meller C, Schidlowski M, Splieth C: Sealing of proximal surfaces with polyurethane tape: a two-year clinical and radiographic feasibility study. *J Adhes Dent* 2009; 11:91–94.
- [3] Alkilzy M, Tarabai A, Santamaría RM, Splieth CH: Self-assembling Peptide P11-4 and Fluoride for Regenerating Enamel. *J Dent Res* 2018; 97:148–154.
- [4] AWMF: Fissuren- und Grübchenversiegelung. https://www.awmf.org/uploads/tx_szleitlinien/083-002k_S3_Fissuren-Gruebchenversiegelung_2017-04.pdf, 2017.
- [5] Barros MMAF, Queiroz Rodrigues MI de, Muniz FWMG, Rodrigues LKA: Selective, stepwise, or nonselective removal of carious tissue: which technique offers lower risk for the treatment of dental caries in permanent teeth? A systematic review and meta-analysis. *Clin Oral Investig* 2020; 24:521–532.
- [6] Borges AB, Caneppele TMF, Masterson D, Maia LC: Is resin infiltration an effective esthetic treatment for enamel development defects and white spot lesions? A systematic review. *J Dent* 2017; 56:11–18.
- [7] Castillo JL, Rivera S, Aparicio T, Lazo R, Aw T-C, Mancl LL, Milgrom P: The short-term effects of diamine silver fluoride on tooth sensitivity: a randomized controlled trial. *J Dent Res* 2011; 90:203–208.
- [8] Elamin F, Abdelazeem N, Salah I, Mirghani Y, Wong F: A randomized clinical trial comparing Hall vs conventional technique in placing preformed metal crowns from Sudan. *PLoS ONE* 2019; 14:e0217740.
- [9] Elhennawy K, Finke C, Paris S, Reda S, Jost-Brinkmann P-G, Schwendicke F: Selective vs stepwise removal of deep carious lesions in primary molars: 24 months follow-up from a randomized controlled trial. *Clin Oral Investig* 2021; 25:645–652.
- [10] Horst JA: Silver Fluoride as a Treatment for Dental Caries. *Adv Dent Res* 2018; 29:135–140.
- [11] Innes NP, Evans DJP, Stirrups DR: The Hall Technique; a randomized controlled clinical trial of a novel method of managing carious primary molars in general dental practice: acceptability of the technique and outcomes at 23 months. *BMC Oral Health* 2007; 7:18.
- [12] Innes NPT, Chu CH, Fontana M, Lo ECM, Thomson WM, Uribe S, Heiland M, Jepsen S, Schwendicke F: A Century of Change towards Prevention and Minimal Intervention in Cariology. *J Dent Res* 2019; 98:611–617.
- [13] Innes NPT, Frencken JE, Bjørndal L, Maltz M, Manton DJ, Ricketts D, van Landuyt K, Banerjee A, Campus G, Doméjean S, Fontana M, Leal S, Lo E, Machiulskiene V, Schulte A, Splieth C, Zandona A, Schwendicke F: Managing Carious Lesions: Consensus Recommendations on Terminology. *Adv Dent Res* 2016; 28:49–57.
- [14] Kidd E: Should deciduous teeth be restored? Reflections of a cariologist. *Dent Update* 2012; 39:159–62, 165–6.
- [15] Li T, Zhai X, Song F, Zhu H: Selective versus non-selective removal for dental caries: a systematic review and meta-analysis. *Acta Odontol Scand* 2018; 76:135–140.
- [16] Mei ML, Ito L, Cao Y, Li QL, Lo ECM, Chu CH: Inhibitory effect of silver diamine fluoride on dentine demineralisation and collagen degradation. *J Dent* 2013; 41:809–817.
- [17] Mei ML, Li Q-I, Chu C-H, Lo EC-M, Samaranayake LP: Antibacterial effects of silver diamine fluoride on multi-species cariogenic biofilm on caries. *Ann Clin Microbiol Antimicrob* 2013; 12:4.
- [18] Mei ML, Lo ECM, Chu CH: Arresting Dentine Caries with Silver Diamine Fluoride: What's Behind It? *J Dent Res* 2018; 97:751–758.
- [19] Meyer-Lueckel H, Wardius A, Krois J, Bitter K, Moser C, Paris S, Wierichs RJ: Proximal caries infiltration - Pragmatic RCT with 4 years of follow-up. *J Dent* 2021; 111:103733.

- [20] Midani R, Splieth CH, Mustafa Ali M, Schmoedel J, Mourad SM, Santamaria RM: Success rates of preformed metal crowns placed with the modified and standard hall technique in a paediatric dentistry setting. *Int J Paediatr Dent* 2019; 29:550–556.
- [21] Neusser S, Krauth C, Hussein R, Bitzer EM: Clinical effectiveness and cost-effectiveness of fissure sealants in children and adolescents with a high caries risk. *GMS Health Technol Assess* 2014; 10:Doco2.
- [22] Rosenblatt A, Stamford TCM, Niederman R: Silver diamine fluoride: a caries „silver-fluoride bullet“. *J Dent Res* 2009; 88:116–125.
- [23] Santamaria RM, Innes NPT, Machiulskiene V, Evans DJP, Alkilzy M, Splieth CH: Acceptability of different caries management methods for primary molars in a RCT. *Int J Paediatr Dent* 2015; 25:9–17.
- [24] Santamaria RM, Innes NPT, Machiulskiene V, Schmoedel J, Alkilzy M, Splieth CH: Alternative Caries Management Options for Primary Molars: 2.5-Year Outcomes of a Randomised Clinical Trial. *Caries Res* 2018; 51:605–614.
- [25] Schwendicke F, Frencken JE, Bjørndal L, Maltz M, Manton DJ, Ricketts D, van Landuyt K, Banerjee A, Campus G, Doméjean S, Fontana M, Leal S, Lo E, Machiulskiene V, Schulte A, Splieth C, Zandona AF, Innes NPT: Managing Carious Lesions: Consensus Recommendations on Carious Tissue Removal. *Adv Dent Res* 2016; 28:58–67.
- [26] Slayton RL, Urquhart O, Araujo MWB, Fontana M, Guzmán-Armstrong S, Nascimento MM, Nový BB, Tinanoff N, Weyant RJ, Wolff MS, Young DA, Zero DT, Tampi MP, Pilcher L, Banfield L, Carrasco-Labra A: Evidence-based clinical practice guideline on nonrestorative treatments for carious lesions: A report from the American Dental Association. *J Am Dent Assoc* 2018; 149:837-849.e19.
- [27] 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, Santamaria 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* 2020:1–9.
- [28] Turton B, Horn R, Durward C: Caries arrest and lesion appearance using two different silver fluoride therapies on primary teeth with and without potassium iodide: 12-month results. *Clin Exp Dent Res* 2021; 7:609–619.
- [29] US food and drug administration: Diammine silver fluoride dental hypersensitivity varnish. <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm?ID=K102973>, 2017.
- [30] van der Zee V, van Amerongen WE: Short communication: Influence of preformed metal crowns (Hall technique) on the occlusal vertical dimension in the primary dentition. *Eur Arch Paediatr Dent* 2010; 11:225–227.
- [31] van Loveren C: Sugar Restriction for Caries Prevention: Amount and Frequency. Which Is More Important? *Caries Res* 2019; 53:168–175.
- [32] Vasquez E, Zegarra G, Chirinos E, Castillo JL, Taves DR, Watson GE, Dills R, Mancl LL, Milgrom P: Short term serum pharmacokinetics of diammine silver fluoride after oral application. *BMC Oral Health* 2012; 12:60.
- [33] Wierichs RJ, Carvalho TS, Wolf TG: Efficacy of a self-assembling peptide to remineralize initial caries lesions - A systematic review and meta-analysis. *J Dent* 2021; 109:103652.
- [34] Ying Lam PP, Sardana D, Luo W, Ekambaram M, Man Lee GH, Man Lo EC, Yung Yiu CK: Glass Ionomer Sealant versus Fluoride Varnish Application to Prevent Occlusal Caries in Primary Second Molars among Preschool Children: A Randomized Controlled Trial. *Caries Res* 2021; 55:322–332.
- [35] Zhao IS, Gao SS, Hiraishi N, Burrow MF, Duangthip D, Mei ML, Lo EC-M, Chu C-H: Mechanisms of silver diamine fluoride on arresting caries: a literature review. *Int Dent J* 2018; 68:67–76.