

- [1] Petti S, Glendor U, Andersson L. World traumatic dental injury prevalence and incidence, a meta-analysis—One billion living people have had traumatic dental injuries. *Dental traumatology*. 2018; 34 (2): 71-86.
- [2] Abbott P. Traumatic dental injuries are now the 5th most prevalent disease/injury in the world-but they are being neglected!! *Dental Traumatology*. 2018; 34 (6): 383.
- [3] Andreasen JO, Andreasen FM, Andersson L. Textbook and color atlas of traumatic injuries to the teeth: John Wiley & Sons; 2018.
- [4] Cvek M, Tsilingaridis G, Andreasen JO. Survival of 534 incisors after intra-alveolar root fracture in patients aged 7-17 years. *Dent Traumatol*. 2008; 24 (4): 379-87.
- [5] Caliskan MK, Pehlivan Y. Prognosis of root-fractured permanent incisors. *Endod Dent Traumatol*. 1996; 2 (3): 129-36.
- [6] Molina JR, Vann WF, Jr., McIntyre JD, Trope M, Lee JY. Root fractures in children and adolescents: diagnostic considerations. *Dent Traumatol*. 2008; 24 (5): 503-9.
- [7] Cohenca N, Simon JH, Roges R, Morag Y, Malfaz JM. Clinical indications for digital imaging in dento-alveolar trauma. Part 1: traumatic injuries. *Dent Traumatol*. 2007; 23 (2): 95-104.
- [8] Bornstein MM, Wölner-Hanssen AB, Sendi P, Von Arx T. Comparison of intraoral radiography and limited cone beam computed tomography for the assessment of root-fractured permanent teeth. *Dental Traumatology*. 2009; 25 (6): 571-7.
- [9] May JJ, Cohenca N, Peters OA. Contemporary management of horizontal root fractures to the permanent dentition: diagnosis--radiologic assessment to include cone-beam computed tomography. *Pediatr Dent*. 2013; 35 (2): 120-4.
- [10] Bourguignon C, Cohenca N, Lauridsen E, Flores MT, O'Connell AC, Day PF, et al. International Association of Dental Traumatology guidelines for the management of traumatic dental injuries: 1. Fractures and luxations. *Dent Traumatol*. 2020; 36 (4): 314-30.
- [11] Andreasen FM, Andreasen JO. Resorption and mineralization processes following root fracture of permanent incisors. *Dental Traumatology*. 1988; 4 (5): 202-14.

- [12] Goldberg F, Frajlich S, Kuttler S, Manzur E, Briseño-Marroquín B. The evaluation of four electronic apex locators in teeth with simulated horizontal oblique root fractures. *Journal of Endodontics*. 2008; 34 (12): 1497-9.
- [13] Andreasen JO, Andreasen FM, Mejare I, Cvek M. Healing of 400 intra-alveolar root fractures. 1. Effect of pre-injury and injury factors such as sex, age, stage of root development, fracture type, location of fracture and severity of dislocation. *Dent Traumatol*. 2004; 20 (4): 192-202.
- [14] Zachrisson BU, Jacobsen I. Long-term prognosis of 66 permanent anterior teeth with root fracture. *Scand J Dent Res*. 1975; 83 (6): 345-54.
- [15] Kim D, Yue W, Yoon T-C, Park S-H, Kim E. Healing of horizontal intra-alveolar root fractures after endodontic treatment with mineral trioxide aggregate. *Journal of endodontics*. 2016; 42 (2): 230-5.

Adhäsive Vollzirkonteilkronen nach mukogingivalchirurgischer Vorbehandlung

Prof. Dr. Claus-Peter Ernst, Dr. Maiker Hormes

- [1] Allen AL. Use of suprapersioal envelope in soft tissue grafting for root coverage, I. Rationale and technique. *Int J Periodontics Restorative Dent.* 1994; 14: 216-227.
- [2] Aykor A, Ozel E. Five-year clinical evaluation of 300 teeth restored with porcelain laminate veneers using total-etch and a modified self-etch adhesive system. *Oper Dent.* 2009; 34: 516-523.
- [3] Bavbek NC, Roulet JF, Ozcan M. Evaluation of microshear bond strength of orthodontic resin cement to monolithic zirconium oxide as a function of surface conditioning method. *J Adhes Dent.* 2014; 16: 473-480.
- [4] Bömicke W, Schürz A, Krisam J, Rammelsberg P, Rues S. Durability of Resin-Zirconia Bonds Produced Using Methods Available in Dental Practice. *J Adhes Dent.* 2016; 18: 17-27.
- [5] Burkhardt R, Lang NP. Coverage of localized gingival recessions: comparison of micro- and macrosurgical techniques. *J Clin Periodontology.* 2005; 32: 287-293.
- [6] Cairo F, Nieri M, Pagliaro U. Efficacy of periodontal plastic surgery procedures in the treatment of localized facial gingival recessions, A systematic review. *J Clin Periodontol.* 2014; 41 Suppl 15: S44-62.
- [7] Chambrone L, Chambrone D, Pustiglioni FE, Chambrone LA, Lima LA. Can subepithelial connective tissue grafts be considered the gold standard procedure in the treatment of Miller Class I and II recession-type defects? *J Dent.* 2008; 36: 659-671.
- [8] Edelhoff D, Prandtner O, Saeidi Pour R, Liebermann A, Stimmelmayer M, Güth JF. Frontzahnrestaurationen: Leistungsfähigkeit von Keramikveneers. *Wissen Kompakt.* 2019; 13 (3): 115-127.
- [9] Ernst CP. Die korrekte Vorbehandlung indirekter Restaurationen zur adhäsiven Befestigung. *ZMK.* 2017; 33: 98-110.
- [10] Ernst CP. Bevorstehende Hochzeit: Ästhetische Notfallbehandlung in der Corona-Zeit. *ZMK.* 2020; 36: 608-701.
- [11] Ernst CP. Ein universelles adhäsives Befestigungs- und Stumpfaufbaumaterial. *ZMK.* 2020; 36: 294-309.
- [12] Fickl S, Nannmak U, Schlagenhauf U, Hurzeler MB, Kebschull M. Porcine dermal matrix in the treatment of dehiscence-type defects - an experimental split-mouth animal trial. *Clin Oral Implants Res.* 2015; 26: 799-805.
- [13] Foushee DG, Moriarty JD, Simpson DM. Effects of mandibular orthognathic treatment on mucogingival tissues. *J Periodontol.* 1985; 56: 727-733.
- [14] Fradeani M, Redemagni M, Corrado M. Porcelain laminate veneers: 6- to 12-year clinical evaluation – a retrospective study. *Int J Periodontics Restorative Dent.* 2005; 25: 9-17.
- [15] Hajto J. Veneers Materialien und Methoden im Vergleich. *Teamwork.* 2000; 3: 195-202.
- [16] Hajto J. Veneers – eine wertvolle Ergänzung für jede Praxis. *Cosmetic Dentistry.* 2018; 16: 18-21.

- [17] Huerzeler O, Weng MB, Weng D. A single-incision technique to harvest subepithelial connective tissue grafts from the palate. *Int J Periodontics Restorative Dent*. 1999; 19: 279-287.
- [18] Inokoshi M, De Munck J, Minakuchi S, Van Meerbeek B. Meta-analysis of bonding effectiveness to zirconia ceramics. *J Dent Res*. 2014; 93: 329-334.
- [19] Inokoshi M, Van Meerbeek B. Adhesively luted zirconia restorations: why and how? *J Adhes Dent*. 2014; 16: 294.
- [20] Ishii R, Tsujimoto A, Takamizawa T, Tsubota K, Suzuki T, Shimamura Y, Miyazaki M. Influence of surface treatment of contaminated zirconia on surface free energy and resin cement bonding. *J Dent Mater*. 2015; 34: 91-97.
- [21] Kasaj A. 2016. Gingival recession coverage: Do we still need autogenous grafts? *Quintessence Int*. 2016; 47: 775-783.
- [22] Kassab MM, Cohen RE. The etiology and prevalence of gingival recession. *J Am Dent Assoc*. 2003; 134: 220-225.
- [23] Kern M, Pasia N, Sasse M, Yazigi C. Ten-year outcome of zirconia ceramic cantilever resin-bonded fixed dental prostheses and the influence of the reasons for missing incisors. *J Dent*. 2017; 65: 521-555.
- [24] Mierau HD, Fiebig A. Zur Epidemiologie der Gingivarezessionen und möglicher klinischer Begleiterscheinungen - Untersuchung an 2410 18-22-jährigen. *Dtsch Zahnärztl Z*. 1986; 41: 371-381.
- [25] Özcan M. Air abrasion of zirconia resin-bonded fixed dental prostheses prior to adhesive cementation: why and how? *J Adhes Dent*. 2013; 15: 394.
- [26] Özcan M, Bock T. Protocol for Removal of Clinically Relevant Contaminants from Zirconium Dioxide Fixed Dental Prostheses. *J Adhes Dent*. 2015; 17: 576-577.
- [27] Roccuzzo M, Bunino M, Needleman I, Sanz M. Periodontal plastic surgery for treatment of localized gingival recessions: a systematic review. *J Clin Periodontology*. 2002; 29 Suppl. 3: 178-184.
- [28] Rotundo R, Pini-Prato G. Use of a new collagen matrix (mucograft) for the treatment of multiple gingival recessions: case reports. *Int J Periodontics Restorative Dent*. 2012; 32: 413-419.
- [29] Schmitt CM, Moest T, Lutz R, Wehrhan F, Neukam FW, Schlegel KA. Long-term outcomes after vestibuloplasty with a porcine collagen matrix (Muvograft) versus the free gingival graft: a comparative prospective clinical trial. *Clin Oral Implants Res*. 2016; 27: 125-133.
- [30] Tonetti, Cortellini MS, Pellegrini G, Nieri M, Bonaccini D, Allegri M, Bouchard P, Cairo F, Conforti G, Fourmoussis I, Graziani F, Guerrero A, Halben I, Melt J, Raserini G, Topoll H, Wachtel H, Wallkamm B, Zabalegui I, Zuh R. Xenogenic collagen matrix or autologous connective tissue graft as adjunct to coronally advanced flaps for coverage of multiple adjacent gingival recession: Randomized trial assessing non-inferiority in root coverage and superiority in oral health-related quality of life. *J Clin Periodontol*. 2018; 45: 78-88.
- [31] Vacek, Gher JS, Gher ME, Assad DA, Richardson AC, Giambaresi LI. The dimensions of the human dentogingival junction. In *J Periodontics Restorative Dent*. 1994; 14: 154-165.

[32] Zucchelli G, de Sanctis M.. Long-term outcome following treatment of multiple Miller class I and II recession defects in esthetic areas of the mouth. J Periodontology. 2005; 76: 2286-2292.

[33] Zuhr O, Fickl S, Wachtel H, Bolz W, Hurzeler MB. Covering of gingival recessions with a modified microsurgical tunnel technique: case report. Int J Periodontics Restorative Dent. 2007; 27: 457-463.

Umweltbezogen nachhaltige Zahnheilkunde

Dagmar Kromer-Busch

PNC (16) 1/2022, S. 42-45

ZMK (38) 3/2022, 108-113

1. Behrend A, Blank J. Relevanz der ökologischen Nachhaltigkeit in der Zahnheilkunde. Welche Möglichkeiten für den Klimaschutz gibt es in der Zahnmedizin und welchen Stellenwert hat er für Patienten? Ergebnisse einer Online-Befragung. Quintessenz Team-Journal. 2022; 52: 7–13.
2. BZÄK Stellungnahme zur Nachhaltigkeit. 14.04.2021.
<https://www.bzaek.de/service/positionen-statements/einzelansicht/nachhaltigkeit-in-der-zahnmedizin-sustainability-in-dentistry.html>; zuletzt abgerufen 25.01.2022
3. BZÄK, VDDI und BVD. Presseinformation Mehr Nachhaltigkeit und Umweltschutz in der Zahnmedizin. 29.09.2021.
<https://www.bzaek.de/presse/presseinformationen/presseinformation/bzaek-vddi-bvd-mehr-nachhaltigkeit-und-umweltschutz-in-der-zahnmedizin.html>; zuletzt abgerufen: 24.01.2022
4. Duane B, Stancliffe R, Miller FA, Sherman J, Pasdeki-Clewer E. Sustainability in dentistry: a multifaceted approach is needed. J Dent Res. 2020 Aug;99(9):998–1003.
5. Duane B, Croasdale K, Ramasubbu D, Harford S, Steinbach I, Stancliffe R, Vadher D. Environmental sustainability: measuring and embedding sustainable practice into the dental practice. Br Dent J. 2019;226(11):891–896.
6. Duane B, Harford S, Ramasubbu D, Stancliffe R, Pasdeki-Clewer E, Lomax R, Steinbach I. Environmentally sustainable dentistry: a brief introduction to sustainable concepts within the dental practice. Br Dent J. 2019;226(4):292–295.
7. Duane B, Harford S, Steinbach I, Stancliffe R, Swan J, Lomax R, Pasdeki-Clewer E. Environmentally sustainable dentistry: energy use within the dental practice. Br Dent J. 2019;226(5):367–373.
8. Duane B, Ramasubbu D, Harford S, Steinbach I, Stancliffe R, Ballantyne G. Environmental sustainability and biodiversity within the dental practice. Br Dent J. 2019;226(9):701–705.
9. Duane B, Ramasubbu D, Harford S, Steinbach I, Stancliffe R, Croasdale K, Pasdeki-Clewer E. Environmental sustainability and procurement: purchasing products for the dental setting. Br Dent J. 2019;226(15):453–458.
10. Duane B, Ramasubbu D, Harford S, Steinbach I, Swan J, Croasdale K, Stancliffe R. Environmental sustainability and waste within the dental practice. Br Dent J. 2019;226(8):611–618. (single use vs. multiple use)

11. Duane B, Steinbach I, Ramasubbu D, Stancliffe R, Croasdale K, Harford S, Lomax R. Environmental sustainability and travel within the dental practice. *Br Dent J.* 2019;226(16):525–530.
12. Duane B, Lee M, White S, Stancliffe R, Steinbach I. An estimated carbon footprint of NHS primary dental care within England. How can dentistry be more environmentally sustainable? *Br Dent J.* 2017;223:589–593.
13. FDI Press Release. FDI World Dental Federation Sustainability in Dentistry initiative unites eco-Conscious dental industry partner around a common aim. 05.03.2021. <https://www.fdiworlddental.org/fdi-world-dental-federation-sustainability-dentistry-initiative-unites-eco-conscious-dental>; zuletzt abgerufen 25.01.2022
14. FDI General Assembly. Nachhaltigkeit in der Zahnmedizin, adopted August 2017, Madrid/Spain. <https://www.fdiworlddental.org/de/nachhaltigkeit-der-zahnmedizin>; zuletzt abgerufen 25.01.2022
15. Giessmann M. Nachhaltigkeit in der Zahnmedizin. Der Becher aus Pappe ist nur der Anfang. *zm.* 2022 Jan;112(01/02): 52–56
16. Lyne A, Ashley P, Saget S, Costa M, Underwood B, Duane B. Combining evidence-based healthcare with environmental sustainability: using the toothbrush as a model. *British dental journal.* 2020 Sept;229(5): 303–309 - 10.1038/s41415-020-1981-0. https://www.researchgate.net/publication/344225318_Combining_evidence-based_healthcare_with_environmental_sustainability_using_the_toothbrush_as_a_model
17. Martin N et al: Awareness and barriers to sustainability in dentistry: A scoping review. *J Dent.* 2021 Sept;112:103735/ online 25 June 2021 open access article
18. Martin N et al: Drivers, opportunities and best practice for sustainability in dentistry: A scoping review. *J Dent.* 2021 Sept;112:103737/ online 26 June 2021 open access article
19. Martin N, Smith L, Mulligan S. Sustainable Oral Healthcare and the Environment: Mitigation Strategies. *Dent Update.* 2021;48:524–531.
20. Nachhaltigkeit in Arztpraxen und Apotheken. Eine Studie der Deutschen Apotheker- und Ärztekbank. DocCheck Research. Online-Befragung Juli/August 2021. <https://newsroom.apobank.de/pressreleases/apobank-umfrage-in-praxen-und-apotheken-fur-mehr-nachhaltigkeit-braucht-es-mehr-unterstutzung-3133403>; zuletzt abgerufen 24.01.2022
21. Sustainable Development Unit: What we do. 2019. www.sduhealth.org.uk/about-us/what-we-do.aspx; zuletzt abgerufen 25.01.2022
22. World Commission on Environment and Development (Brundtland Commission): our Common Future. Oxford: Oxford University Press. 1987 <http://www.un-documents.net/our-common-future.pdf>; zuletzt abgerufen: 24.01.2022. Orig.: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

