LITERATUR

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Thema: Periimplantäre Erkrankungen – Erkennen, Therapieren und Vorbeugen

Autoren: Priv.-Doz. Dr. Sven Rinke M.Sc., M.Sc., ZA Gerhard Schmalz, Priv.-Doz. Dr. Dirk Ziebolz M.Sc.

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1. Buser D, Janner SF, Wittneben JG, Brägger U, Ramseier CA, Salvi GE. 10-year survival and success rates of 511 titanium implants with a sandblasted and acid-etched surface: a retrospective study in 303 partially edentulous patients. Clinical Implant Dentistry and Related Research 2012; 14: 839-851.
2. Mombelli A, Müller N, Cionca N. The epidemiology of peri-implantitis. Clinical Oral Implants Research 2012; 23: 67–76
3. Tomasi C, Derks J. Clinical research of peri-implant diseases – quality of reporting, case definitions and methods to study incidence, prevalence and risk factors of periimplant diseases. Journal of Clinical Periodontology 2012; 39: 207–223.
4. Lang NP, Berglundh T. Periimpant diseases: where are we now? Consensus of the Seventh European Workshop on Periodontology. Journal of Clinical Periodontology 2011; 38: 178–181.
5. Berglundh T, Zitzmann N, Donati M. Are peri-implantitis lesions different from periodontitis lesions? Journal of Clinical Periodontology 2011; 38: 188–202.
6. Heitz-Mayfield LJ. Peri-implant diseases: diagnosis and risk indicators. Journal of Clinical Periodontology 2008; 35: 292-304.
7. Mombelli A. Microbiology and antimicrobial therapy of peri-implantitis. Periodontol 2000. 2002;28:177-189.
8. Berglundh T, Lindhe J. Dimension of the periimplant mucosa. Biological width revisited. J Clin Periodontol 1996;23:971-973.
9. Abrahamsson I, Berglundh T, Wennstrom J, Lindhe J. The peri-implant hard and soft tissues at different implant systems. A comparative study in the dog. Clin oral implants res 1996;7:212-219.
10. Lindhe J, Berglundh T. Die periimplantäre Mukosa. In: Lindhe J, Karring K, Lang N (eds). Klinische Parodontologie und Implantologie. Berlin: Quintessenz, 1999:862-872.
11. Toijanic JA, Ward CB, Gewerth ME, Banakis ML. A longitudinal clinical comparison of plaque-induced inflammation between gingival and peri-implant soft tissues in the maxilla. J Periodontol 2001;72:1139-45.
12. Ramseier C, Walter C. Der Einfluss des Tabakkonsums auf die orale Implantologie. Implantologie 2007;15:153-164.
13. Kotsovilis S, Karoussis IK, Trianti M, Fourmousis I. Therapy of peri-implantitis: a systematic review. J Clin Periodontol 2008;35:621-629.
14. Faveri M, Figueiredo LC, Shibli JA, Pérez-Chaparro PJ, Feres M. Microbiological diversity of peri-implantitis biofilms. Advanced Experimental Medical Biology 2015; 830: 85-96.
15. Albertini M, López-Cerero L, O'Sullivan MG, Chereguini CF, Ballesta S, Ríos V, Herrero-Climent M, Bullón P. Assessment of periodontal and opportunistic flora in patients with peri-implantitis. Clinical Oral Implants Research 2015; 26: 937-941.

16. Persson GR, Renvert S. Cluster of bacteria associated with peri-implantitis. Clinical Implant Dentistry and Related Research 2014; 16: 783-793.
17. Eick S, Ramseier CA, Rothenberger K, Brägger U, Buser D, Salvi GE. Microbiota at teeth and implants in partially edentulous patients. A 10-year retrospective study. Clinical Oral Implants Research 2015 doi: 10.1111/clr.12588. [Epub ahead of print]
18. Charalampakis G, Belibasakis GN. Microbiome of peri-implant infections: lessons from conventional, molecular and metagenomic analyses. Virulence 2015; 6: 183-187.
19. Mombelli A, Décaillet F. The characteristics of biofilms in peri-implant disease. Journal of Clinical Periodontology 2011; 11: 203-213.
20. Quirynen M, Vogels R, Peeters W, van Steenberghe D, Naert I, Haffajee A. Dynamics of initial subgingival colonization of 'pristine' peri-implant pockets. Clin Oral Implants Res 2006;17:25-37.
21. Rinke S, Ohl S, Ziebolz D, Lange K, Eickholz P. Prevalence of periimplant disease in partially edentulous patients: a practice-based cross-sectional study. Clinical Oral Implants Research 2011; 22: 826-833.
22. Belibasakis GN. Microbiological and immuno-pathological aspects of peri-implant diseases. Archives Oral Biology 2014; 59: 66-72.
23. Zhuang LF, Watt RM, Mattheos N, Si MS, Lai HC, Lang NP. Periodontal and peri-implant microbiota in patients with healthy and inflamed periodontal and peri-implant tissues. Clinical Oral Implants Research 2014 doi: 10.1111/clr.12508. [Epub ahead of print]
24. Basegmez C, Yalcin S, Yalcin F, Ersanli S, Mijiritsky E. Evaluation of periimplant crevicular fluid prostaglandin E2 and matrix metalloproteinase-8 levels from health to periimplant disease status: a prospective study. Implant Dentistry 2012; 21: 306-310.
25. Arakawa H, Uehara J, Hara ES, Sonoyama W, Kimura A, Kanyama M, Matsuka Y, Kuboki T. Matrix metalloproteinase-8 is the major potential collagenase in active peri-implantitis. Journal of Prosthodontic Research 2012; 56: 249-255.
26. Ramseier CA, Eick S, Brönnimann C, Buser D, Brägger U, Salvi GE. Host-derived biomarkers at teeth and implants in partially edentulous patients. A 10-year retrospective study. Clinical Oral Implants Research 2015 10.1111/clr.12566. [Epub ahead of print]
27. Jacobi-Gresser E, Huesker K, Schütt S. Genetic and immunological markers predict titanium implant failure: a retrospective study. International Journal of Oral & Maxillofacial Surgery 2013; 42: 537-543.
28. Vaz P, Gallas MM, Braga AC, Sampaio-Fernandes JC, Felino A, Tavares P. IL1 gene polymorphisms and unsuccessful dental implants. Clinical Oral Implants Research 2012; 23: 1404-1413.
29. Lachmann S, Kimmerle-Müller E, Axmann D, Scheideler L, Weber H, Haas R. Associations between peri-implant crevicular fluid volume, concentrations of crevicular inflammatory mediators, and composite IL-1A -889 and IL-1B +3954 genotype. A cross-sectional study on implant recall patients with and without clinical signs of peri-implantitis. Clinical Oral Implants Research 2007; 18: 212-223.
30. Melo RF, Lopes BM, Shibli JA, Marcantonio E Jr, Marcantonio RA, Galli GM. Interleukin-1β and interleukin-6 expression and gene polymorphisms in subjects with peri-implant disease. Clinical Implant Dentistry and Related Research 2012; 14: 905-914.
31. Rogers MA, Figliomeni L, Baluchova K, Tan AE, Davies G, Henry PJ, Price P. Do interleukin-1 polymorphisms predict the development of periodontitis or the success of dental implants? Journal of Periodontal Research 2002; 37: 37-41.
32. Dereka X, Mardas N, Chin S, Petrie A, Donos N. A systematic review on the association between genetic predisposition and dental implant biological complications. Clinical Oral Implants Research 2012; 23: 775-788.
33. Albrektsson T, Donos N; Working Group 1. Implant survival and complications.The Third EAO consensus conference 2012. Clin Oral Implants Res 2012;23.Suppl 6:63-5.

34. Jung RE, Zembic A, Pjetursson BE, Zwahlen M, Thoma DS. Systematic review of the survival rate and the incidence of biological, technical, and aesthetic complications of single crowns on implants reported in longitudinal studies with a mean follow-up of 5 years. Clin Oral Implants Res 2012;23 Suppl 6:2-21.
35. Pjetursson BE, Asgeirsson AG, Zwahlen M, Sailer I. Improvements in implant dentistry over the last decade: comparison of survival and complication rates in older and newer publications. Int J Oral Maxillofac Implants 2014;29.Suppl:308-24.
36. Mombelli A, Müller N, Cionca N. The epidemiology of peri-implantitis. Clin Oral Implants Res 2012;23 Suppl 6:67-76.
37. Derks J, Tomasi C. Peri-implant health and disease. A systematic review of current epidemiology. J Clin Periodontol 2015;42 Suppl 16:S158-71.
38. Renvert S, Polyzois IN. Clinical approaches to treat peri-implant mucositis and peri-implantitis. Periodontol 2000 2015;68(1):369-404.
39. Renvert S, Roos-Jansåker AM, Claffey N. Non-surgical treatment of peri-implant mucositis and peri-implantitis: a literature review. J Clin Periodontol 2008;35(8 Suppl):305-15.
40. Renvert S, Polyzois I, Persson GR. Treatment modalities for peri-implant mucositis and peri-implantitis. Am J Dent 2013;26(6):313-8.
41. Jepsen S, Berglundh T, Genco R, Aass AM, Demirel K, Derks J, Figuero E, Giovannoli JL, Goldstein M, Lambert F, Ortiz-Vigon A, Polyzois I, Salvi GE, Schwarz F, Serino G, Tomasi C, Zitzmann NU. Primary prevention of peri-implantitis: managing peri-implant mucositis. J Clin Periodontol 2015;42 Suppl 16:S152-7.
42. Klinge B, Meyle J. Peri-implant tissue destruction. The Third EAO Consensus Conference 2012, Working group 2. Clin Oral Implants Res 2012;23 Suppl 6:108-10.
43. Renvert S, Polyzois I and Claffey N . How do implant surface characteristics influence peri implant disease? J Clin Periodontol 2011; 38 Suppl 11: 214-22.
44. Heitz-Mayfield LJ, Mombelli A.The therapy of peri-implantitis: a systematic review. Int J Oral Maxillofac Implants 2014;29 Suppl:325-45.
45. Figuero E, Graziani F, Sanz I, Herrera D, Sanz M. Management of peri-implant mucositis and peri-implantitis. Periodontol 2000 2014;66(1):255-73.
46. Sahm N, Becker J, Santel T, Schwarz F. Non-surgical treatment of peri-implantitis using an air-abrasive device or mechanical debridement and local application of chlorhexidine: a prospective, randomized, controlled clinical study. J Clin Periodontol 2011: 38: 872–878.
47. Schwarz F, Aoki A, Sculean A, Becker J. The impact of laser application on periodontal and peri-implant wound healing. Periodontol 2000 2009: 51: 79–108.
48. Schwarz F, Sculean A, Rothamel D, Schwenzer K, Georg T, Becker J. Clinical evaluation of an Er:YAG laser for non-surgical treatment of peri-implantitis: A pilot stud. Clin Oral Implants Res 2005: 16: 44–52.
49. Schwarz F, Bieling K, Bonsmann M, Latz T, Becker J. Nonsurgical treatment of moderate and advanced periimplantitis lesions: a controlled clinical study. Clin Oral Invest 2006a: 10: 279–288.
50. Schwarz F, Bieling K, Nuesry E, Sculean A, Becker J. Clinical and histologic healing pattern of peri-implantitis lesions following non surgical treatment with an Er:YAG Laser. Lasers Surg Med 2006b: 38: 663–871.
51. Alani A, Bishop K. Peri-implantitis. Part 3: current modes of management. Br Dent J 2014;217(7):345-9.
52. Claffey N, Clarke E, Polyzois I, Renvert S. Surgical treatment of peri-implantitis. J Clin Periodontol 2008;35(8 Suppl):316-32.
53. Mombelli A, Moëne R, Décaillet F. Surgical treatments of peri-implantitis. Eur J Oral Implantol 2012;5 Suppl:S61-70.
54. Leonhardt Å, Dahlén G, Renvert S. 5-year clinical, microbiological and radiological outcome following treatment of peri-implantitis in man. J Periodontol 2003; 74: 1415–1422.

55. Máximo MB, Mendonca AC, Santos VR, Figueiredo CL, Feres M, Duarte PM. Short-term clinical and microbiological evaluations of peri-implant diseases before and after mechanical anti-infective therapies. Clin Oral Implants Res 2009; 20: 99–108.
56. Romeo E, Lops D, Chiapasco M, Ghisolfi M, Vogel G. Therapy of peri-implantitis with resective surgery. A 3 year clinical trial on rough screw shaped oral implants. Part II: radiographic outcome. Clin Oral Implants Res 2007; 18: 179–187.
57. Ji Y-J, Tang Z-H, Wang R, Cao J, Cao C-F, Jin L-J. Effect of glycine powder air-polishing as an adjunct in the treatment of peri-implant mucositis: a pilot clinical trial. Clin Oral Implants Res 2014; 25: 683–689.
58. Renvert S, Polyzois I, Maguire R. Re-osseointegration on previously contaminated surfaces: a systematic review. Clin Oral Implants Res 2009; 20(Suppl. 4): 216–217.
59. Schwarz F, Sahm N, Schwarz K, Becker J. Impact of defect configuration on the clinical outcome following surgical regenerative therapy of peri-implantitis. J Clin Periodontol 2010; 37: 449–455.
60. Schwarz F, Sahm N, Becker J. Combined surgical therapy of advanced peri-implantitis lesions with concomitant soft tissue volume augmentation. A case series. Clin Oral Implants Res 2014; 25: 132–136.
61. Roccuzzo M, Bonino L, Bonino L, Dalmasso P. Surgical therapy of peri-implantitis lesions by means of a bovine-derived xenograft: comparative results of a prospective stugy on two different implant surfaces. J Clin Periodontol 2011; 38: 738–745.
62. Schwarz F, Sahm N, Bieling K, Becker J. Surgical regenerative treatment of peri-implantitis lesions using a nanocrystaline hydroxyapatite or a natural bone mineral in combination with a collagen membrane: a four year clinical follow-up report. J Clin Periodontol 2009; 36: 807 814.
63. Roos-Jansåker A-M, Lindahl C, Persson GR, Renvert S. Long term stability of surgical bone regenerative procedures of peri-implant lesions in a prospective case–control study over 3 years. J Clin Periodontol 2011; 38: 590–597.
64. Teughels W, Van Assche N, Sliepen I, Quirynen M. Effect of material characteristics and or surface topography on biofilm development. Clin Oral Implants Res 2006; 17(Suppl. 2): 68 81.
65. Wiltfang J, Zernial O, Behrens E, Schegel A, Warnake P, Becker ST. Regenerative treatment of peri-implantitis bone defects with a combination of autolougous bone and a demineralized xenogenic bone graft: a series of 36 defects. Clin Implant Dent Relat Res 2012; 14: 421–427.
66. Roccuzzo M, De Angelis N, Bonino L, Aglietta M. Ten-year results of a three-arm prospective cohort study on implants in periodontally compromised patients. Part 1: Implant loss and radiographic bone loss. Clin Oral Implants Res 2010;21:490-496.
67. Roccuzzo M, Bonino F, Aglietta M, Dalmasso P. Ten-year results of a three arms prospective cohort study on implants in periodontally compromised patients. Part 2: Clinical results. Clin Oral Implants Res 2012;23: 389-395.
68. Roccuzzo M, Bonino L, Dalmasso P, Aglietta M. Long-term results of a three arms prospective cohort study on implants in periodontally compromised patients: 10-year data around sandblasted and acid-etched (SLA) surface. Clin Oral Implants Res 2014;25:1105-1112.
69. Pjetursson BE, Helbling C, Weber HP, et al. Peri-implantitis susceptibility as it relates to periodontal therapy and supportive care. Clin Oral Implants Res 2012;23:888-894.
70. Tonetti MS, Chapple IL, Jepsen S, Sanz M. 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.
71. Salvi GE, Zitzmann NU. The effects of anti-infective preventive measures on the occurrence of biologic implant complications and implant loss: a systematic review. Intl J Oral Maxillofac Implants. 2014;29(Suppl):292–307.
72. Heitz-Mayfield, L.J. & Lang, N.P. (2010) Comparative biology of chronic and aggressive periodontitis vs. peri-implantitis. Periodontology 2000: 167–181.

73. Smeets R, Henningsen A, Jung O, Heiland M, Hammächer C, Stein JM. Definition, etiology, prevention and treatment of peri-implantitis--a review. Head Face Med. 2014;10:34.
74. Clementini M, Rossetti PH, Penarrocha D, Micarelli C, Bonachela WC, Canullo L: Systemic risk factors for peri-implant bone loss: a systematic review and meta-analysis. Int J Oral Maxillofac Surg. 2014;43:323–34.
75. Monje A, Aranda L, Diaz KT, Alarcón MA, Bagramian RA, Wang HL, Catena A. Impact of Maintenance Therapy for the Prevention of Peri-implant Diseases: A Systematic Review and Meta-analysis. J Dent Res. 2016;95:372-9.
76. Heitz-Mayfield LJ. Peri-implant diseases: diagnosis and risk indicators. J Clin Periodontol. 2008;35:292-304.
77. Jepsen S, Berglundh T, Genco R, Aass AM, Demirel K, Derks J, Figuero E, Giovannoli JL, Goldstein M, Lambert F, Ortiz-Vigon A, Polyzois I, Salvi GE, Schwarz F, Serino G, Tomasi C, Zitzmann NU. Primary prevention of peri-implantitis: managing peri-implant mucositis. J Clin Periodontol 2015;42 Suppl 16:152-157.
78. Alani A, Bishop K. Peri-implantitis. Part 2: Prevention and maintenance of peri-implant health. Br Dent J. 2014 Sep;217(6):289-97.
79. Frisch E, Ziebolz D, Vach K, Ratka-Krüger P. Supportive post-implant therapy: patient compliance rates and impacting factors: 3-year follow-up. J Clin Periodontol. 2014 Oct;41(10):1007-14.
80. Silverman J, Kurtz, S, Draper J. Skills for Communicating with Patients. 3rd Edition, Radcliffe Publishing, London, New York; 2013.
81. Wölber J, Frick KM. Motivierende Gesprächsführung in der zahnärztlichen Therapie. Zahnmedizin up2date 2014;8:247-269.
82. Schwendicke F, Tu YK, Stolpe M. Preventing and Treating Peri-Implantitis: A Cost-Effectiveness Analysis. J Periodontol 2015;86:1020-1029.
83. Costa FO, Takenaka-Martinez S, Cota LO, Ferreira SD, Silva GL, Costa JE. Peri-implant disease in subjects with and without preventive maintenance: a 5-year follow-up. J Clin Periodontol. 2012;39:173-81.
84. Renvert S, Polyzois IN. Clinical approaches to treat peri-implant mucositis and peri-implantitis. Periodontol 2000 2015;68:369-404.
85. Renvert S, Roos-Jansåker AM, Claffey N. Non-surgical treatment of peri-implant mucositis and peri-implantitis: a literature review. J Clin Periodontol. 2008;35(8 Suppl):305-15.
86. Renvert S, Polyzois I, Persson GR. Treatment modalities for peri-implant mucositis and peri-implantitis. Am J Dent. 2013;26:313-8.
87. Chairay, J.P., Boulekbache, H., Jean, A., Soyer, A. & Bouchard, P. (1997) Scanning electron microscopic evaluation of the effects of an air-abrasive system on dental implants: a comparative in vitro study between machined and plasma-sprayed titanium surfaces. Journal of Periodontology 68: 1215–1222.
88. Sahrmann P, Ronay V, Sener B, Jung RE, Attin T, Schmidlin PR. Cleaning potential of glycine air-flow application in an in vitro peri-implantitis model. Clin Oral Implants Res. 2013 Jun;24(6):666-70.
89. Giannobile WV, Lang NP. Are Dental Implants a Panacea or Should We Better Strive to Save Teeth? J Dent Res. 2016;95:5-6.