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**Thema:** Allogene Knochenblockaugmentation bei Parodontitispatienten  
Teil 1: Zielsetzung und Methode

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## Literatur

- 1) Albrektsson T, Zarb G, Worthington P, Eriksson AR. The long-term efficacy of currently used dental implants: A review and proposed criteria of success. *Int J Oral Maxillofac Implants* 1986;1:11-25.
- 2) Ellis E, 3rd, McFadden D. The Value of a Diagnostic Setup for full fixed maxillary implant prosthetics. *J Oral Maxillofac Surg* 2007;65:1764-1771.
- 3) DGZMK 2013. Implantatprothetische Versorgung des zahnlosen Oberkiefers. S3-Leitlinie der DGZMK 2013. online erhältlich: [http://www.dgzmk.de/uploads/tz\\_szdgzmkdocuments/LL\\_Implantatproth.\\_Versorg\\_g.\\_d.\\_zahnlosen\\_OK.pdf](http://www.dgzmk.de/uploads/tz_szdgzmkdocuments/LL_Implantatproth._Versorg_g._d._zahnlosen_OK.pdf); AWMF-Registernummer 083-010.
- 4) Foitzik, C, Merten HA. Restitutio ad integrum. Vom Knochenersatz zum Knochenaufbau. Balingen: Spitta 1999.
- 5) DGZMK 2012. Implantologische Indikationen für die Anwendung von Knochenersatzmaterialien. S2k-Leitlinie der DGZMK 2012. online erhältlich: <http://www.dgzmk.de/zahnaerzte/wissenschaft-forschung/leitlinien/details/document/implantologische-indikationen-fuer-die-anwendung-von-knochenersatzmaterialien-s2k.html>; AWMF-Registernummer 083-009.
- 6) Klein MA, Al-Nawas B. For which clinical indications in dental implantology is the use of bone substitute materials scientifically substantiated? Systematic review, consensus statements and recommendations of the 1st DGI Consensus Conference in September 2010, Aerzen, Germany. *Eur J Oral Implantol* 2011;4(suppl.):11-29.
- 7) Mellonig JT, Nevins M. Guided Bone Regeneration of Bone Defects Associated With Implants: An Evidence-Based Outcome Assessment. *Int J Periodontics Restorative Dent* 1995;15:168-185.
- 8) Grimm WD, Cichon P, Crawford L, Lorey T. Klinische Längsschnittstudie zur gesteuerten Geweberegeneration mit resorbierbaren Membranen (GORE RESOLUT Regeneratives Material). *Parodontologie* 1996;7:237.
- 9) Proussaefs P. Clinical and Histologic Evaluation of the Use of Mandibular Tori As Donor Site for Mandibular Block Autografts: Report of Three Cases. *Int J Periodontics Restorative Dent* 2006;26:43-51.
- 10) Khoury F. Augmentative Verfahren in der Implantologie. *Quintessenz* 2009:S.8-11 / S.18-21.

- 11) Schliephake H, Neukam FW, Wichmann M. Survival analysis of endosseous implants in bone grafts used for the treatment of severe alveolar ridge atrophy. *J Oral Maxillofac Surg* 1997;55(11):1227-1233.
- 12) Garg AK. Knochen - Biologie, Gewinnung, Transplantation in der zahnärztlichen Implantologie. *Quintessenz* 2006;28-33.
- 13) Koylass JM, Valderrama P, Mellonig JT. Histologic Evaluation of an Allogenic Mineralized Bone Matrix in the Treatment of Periodontal Osseous Defects. *Int J Periodontics Restorative Dent* 2012;32:405-411.
- 14) Browning ES, Mealey BL, Mellonig JT. Evaluation of a mineralized cancellous bone allograft for the treatment of periodontal osseous defects: 6-month surgical reentry. *Int J Periodontics Restorative Dent* 2009;29:41-47.
- 15) Gapski R, Neiva R, Oh TJ, Wang HL. Histologic Analyses of Human Mineralized Bone Grafting Material in Sinus Elevation Procedures: A Case Series. *Int J Periodontics Restorative Dent* 2006;26:59-69.
- 16) Noumbissi SS, Lozada JL, Boyne PJ, Rohrer MD, Clem D, Kim JS, Prasad H. Clinical, Histologic and Histomorphometric Evaluation of Mineralized Solvent-Dehydrated Bone Allograft (Puros) in Human Maxillary Sinus Grafts. *J Oral Implantol* 2005;31(4):171-179.
- 17) Minichetti JC, D'Amore JC, Hong AY, Cleveland DB. Human histologic analysis of mineralized bone allograft (Puros) placement before implant surgery. *J Oral Implantol* 2004;30(2):74-82.
- 18) Waasdorp J, Reynolds MA. Allogeneic Bone Onlay Grafts for Alveolar Ridge Augmentation: A Systematic Review. *Int J Oral Maxillofac Implants* 2010;25:525-531.
- 19) Plöger M, Schau I. *Allogene Knochenblöcke in der zahnärztlichen Implantologie*. Spitta-Verlag 2010.
- 20) Esposito M, Grusovin MG, Felice P, Karatzopoulos G, Worthington HV, Coulthard P. The efficacy of horizontal and vertical bone augmentation procedures for dental implants – a Cochrane systematic review. *Eur J Oral Implantol*. 2009;2(3):167-184.
- 21) Arnold WH, Becher S, Dannan A, Widera D, Dittmar T, Jacob M, Mannherz HG, Kaltschmidt B, Kaltschmidt C, Grimm WD. Morphological characterization of periodontium-derived human stem cells. *Ann Anat*. 2010;192(4):215-219.
- 22) Grimm WD, Dannan A, Becher S, Gassmann G, Arnold W, Varga G, Dittmar T. The Ability of Human Periodontium-Derived Stem Cells to Regenerate Periodontal Tissues: A Preliminary In Vivo Investigation. *Int J Periodontics Restorative Dent* 2011;31:e94-e101.
- 23) Sauerbier S, Giessenhagen B, Gutwerk W, Rauch P, Xavier SP, Oshima T, Nagursky H, Gutwald R, Schmelzeisen R. Bone Marrow Aspirate Concentrate Used with Bovine Bone Mineral to Reconstruct Vertical and Horizontal Mandibular Defects: Report of Two Techniques. *Int J Oral Maxillofac Implants* 2013;28:e310-e314.

- 24) Marx RE, Tursun R. A Qualitative and Quantitative Analysis of Autologous Human Multipotent Adult Stem Cells Derived from Three Anatomic Areas by Marrow Aspiration: Tibia, Anterior Ilium, and Posterior Ilium. *Int J Oral Maxillofac Implants* 2013;28:e290-e294.
- 25) Widera D, Grimm WD, Moebius JM, Mikenberg I, Piechhaczek C, Gassmann G, Wolff NA, Thévenod F, Kaltschmidt C, Kaltschmidt B. Highly efficient neural differentiation of human somatic stem cells, isolated by minimally invasive periodontal surgery. *Stem Cells Dev* 2007;16(3):447-460.
- 26) Grimm WD, A Danna, B Giesenagen, I Schau, G Varga, MA Vukovic, SV Sirak. Translational Research: Palatal-derived Ecto-mesenchymal Stem Cells from Human Palate: A New Hope for Alveolar Bone and Cranio-Facial Bone Reconstruction. *Int J Stem Cells* 2014;7(1):23-29.
- 27) Grimm WD, Plöger M, Schau I, Vukovic MA, Shchetinin EV, Akkalaev AB, Avanesian RA, Sirak SV. Complex, three-dimensional reconstruction of critical size defects following delayed implant placement using stem cell-containing subepithelial connective tissue graft and allogenic human bone blocks for horizontal alveolar bone augmentation: A case report as proof of clinical study principles. *Medical News of North Caucasus* 2014;2:122-127.
- 28) Grimm WD, Plöger M, Schau I, Vukovic MA, Shchetinin EV, Arutunov AV, Sirak SV. Prefabricated 3D allogenic bone block in conjunction with stem cell-containing subepithelial connective tissue graft for horizontal alveolar bone augmentation: a case report as proof of clinical study principles. *Medical News of North Caucasus* 2014;2:169-172.
- 29) Schöpf C, Daiber W, Tadic D. Tutoplast®-processed Allografts and Xenografts. In: Jacott M, Antonelli P. *3D Block Technique*. RC Libri 2005.
- 30) Merten HA, Gruber RM, Nitsch A, Ludwig A, Schliephake H. Evaluation oralchirurgischer Augmentationsmaterialien – Ein tierexperimentell-histomorphologischer Vergleich. *Implantologie* 2003;11(3):215-236.
- 31) BDIZ EDI. Guideline: Cologne Classification of Alveolar Ridge Defects (CCARD). Consensus of the 8th European Consensus Conference of BDIZ EDI 2013. online erhältlich: [http://www.bdizedi.org/bdz/web.nsf/gfx/guidelines\\_Konsensus-Leitfaden-2013\\_engl.pdf](http://www.bdizedi.org/bdz/web.nsf/gfx/guidelines_Konsensus-Leitfaden-2013_engl.pdf)
- 32) Grimm WD, Gassmann G, Kübler J, Engler-Hamm D, Jackowski J. The effect of subcrestal placement of the polished surface of implants on marginal soft and hard tissues: a retrospective clinical study. *Int Poster J Dent Oral Med* 2006;8:Poster 310.
- 33) Nissan J, Mardinger O, Calderon S, Romanos GE, Chaushu G. Cancellous bone block allografts for the augmentation of the anterior atrophic maxilla. *Clin Implant Dent Relat Res* 2011;13:104-111.
- 34) Nissan J, Marilena V, Gross O, Mardinger O, Chaushu G. Histomorphometric Analysis Following Augmentation of the Anterior Atrophic Maxilla with Cancellous Bone Block Allograft. *Int J Oral Maxillofac Implants* 2012;27:84-89.