

LITERATUR

Ausgabe: Implantologie Journal 5/19

Thema: Einflussfaktoren auf die Hitzeentwicklung beim Bohrvorgang

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1.Vaughn RC, Peyton FA. The influence of rotational speed on temperature rise during cavity preparation. J Dent Res. 1951;30(5):737-44.

2.Kalidindi V. Optimization of Drill Design and Coolant Systems During Dental Implant Surgery 2004.

3.Davidson SR, James DF. Measurement of thermal conductivity of bovine cortical bone. Medical engineering & physics. 2000;22(10):741-7.

4.Eriksson AR, Albrektsson T. Temperature threshold levels for heat-induced bone tissue injury: a vital-microscopic study in the rabbit. The Journal of prosthetic dentistry. 1983;50(1):101-7.

5.Eriksson RA, Albrektsson T. The effect of heat on bone regeneration: an experimental study in the rabbit using the bone growth chamber. Journal of oral and maxillofacial surgery : official journal of the American Association of Oral and Maxillofacial Surgeons. 1984;42(11):705-11.

6.Noble B. Bone microdamage and cell apoptosis. Eur Cell Mater. 2003;6:46-55;.

7.Tehemar SH. Factors affecting heat generation during implant site preparation: a review of biologic observations and future considerations. The International journal of oral & maxillofacial implants. 1999;14(1):127-36.

8.Berman AT, Reid JS, Yanicko DR, Sih GC, Zimmerman MR. Thermally induced bone necrosis in rabbits. Relation to implant failure in humans. Clinical orthopaedics and related research. 1984(186):284-92.

9.Pandey RK, Panda SS. Drilling of bone: A comprehensive review. Journal of Clinical Orthopaedics and Trauma. 2013;4(1):15-30.

10.Thompson HC. Effect of drilling into bone. J Oral Surg (Chic). 1958;16(1):22-30.

11.Bogovič V, Svete A, Bajsić I. Effects of a drill diameter on the temperature rise in a bone during implant site preparation under clinical conditions. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine. 2016;230(10):907-17.

12. Tahmasbi V, Ghoreishi M, Zolfaghari M. Investigation, sensitivity analysis, and multi-objective optimization of effective parameters on temperature and force in robotic drilling cortical bone. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*. 2017;231(11):1012-24.
13. Karmani S, Lam F. The design and function of surgical drills and K-wires. *Current Orthopaedics*. 2004;18(6):484-90.
14. Saha S, Pal S, Albright JA. Surgical drilling: design and performance of an improved drill. *Journal of biomechanical engineering*. 1982;104(3):245-52.
15. Ercoli C, Funkenbusch PD, Lee H-J, Moss ME, Graser GN. The influence of drill wear on cutting efficiency and heat production during osteotomy preparation for dental implants: a study of drill durability. *The International journal of oral & maxillofacial implants*. 2004;19(3):335-49.
16. Er N, Alkan A, Ilday S, Bengu E. Improved Dental Implant Drill Durability and Performance Using Heat and Wear Resistant Protective Coatings. *Journal of Oral Implantology*. 2018;44(3):168-75.
17. Scarano A, Carinci F, Quaranta A, Di Iorio D, Assenza B, Piattelli A. Effects of bur wear during implant site preparation: an in vitro study. *International journal of immunopathology and pharmacology*. 2007;20(1 Suppl 1):23-6.
18. Lee J, Chavez CL, Park J. Parameters affecting mechanical and thermal responses in bone drilling: A review. *Journal of Biomechanics*. 2018;71:4-21.
19. Iyer S, Weiss C, Mehta A. Effects of drill speed on heat production and the rate and quality of bone formation in dental implant osteotomies. Part I: Relationship between drill speed and heat production. *The International journal of prosthodontics*. 1997;10(5):411-4.
20. Karaca F, Aksakal B, Kom M. Influence of orthopaedic drilling parameters on temperature and histopathology of bovine tibia: An in vitro study. *Medical Engineering & Physics*. 2011;33(10):1221-7.
21. Matthews LS, Green CA, Goldstein SA. The thermal effects of skeletal fixation-pin insertion in bone. *The Journal of bone and joint surgery American volume*. 1984;66(7):1077-83.
22. Sindel A, Dereci Ö, Hatipoğlu M, Altay MA, Özalp Ö, Öztürk A. The effects of irrigation volume to the heat generation during implant surgery. *Medicina oral, patologia oral y cirugía bucal*. 2017;22(4):e506-e11.
23. Lavelle C, Wedgwood D. Effect of internal irrigation on frictional heat generated from bone drilling. *Journal of oral surgery (American Dental Association : 1965)*. 1980;38(7):499-503.

24. Benington IC, Biagioni PA, Briggs J, Sheridan S, Lamey P-J. Thermal changes observed at implant sites during internal and external irrigation. *Clinical oral implants research*. 2002;13(3):293-7.
25. Sener BC, Dergin G, GURSOY B, Kelesoglu E, Slih I. Effects of irrigation temperature on heat control in vitro at different drilling depths. *Clinical Oral Implants Research*. 2009;20(3):294-8.
26. Rashad A, Kaiser A, Prochnow N, Schmitz I, Hoffmann E, Maurer P. Heat production during different ultrasonic and conventional osteotomy preparations for dental implants. *Clinical oral implants research*. 2011;22(12):1361-5.
27. Branemark PI. Osseointegration and its experimental background. *J Prosthet Dent*. 1983;50(3):399-410.
28. Misir AF, Sumer M, Yenisey M, Ergioglu E. Effect of Surgical Drill Guide on Heat Generated From Implant Drilling. *Journal of Oral and Maxillofacial Surgery*. 2009;67(12):2663-8.
29. Bulloch SE, Olsen RG, Bulloch B. Comparison of heat generation between internally guided (cannulated) single drill and traditional sequential drilling with and without a drill guide for dental implants. *The International journal of oral & maxillofacial implants*. 2012;27(6):1456-60.