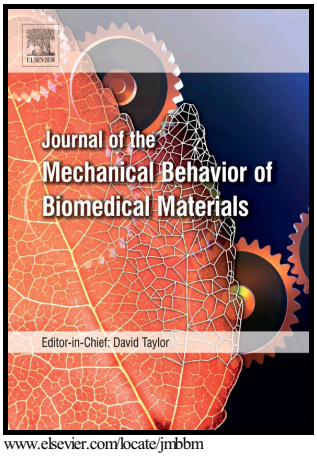

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Andreas Dominik Schwitalla, Tycho Zimmermann, Tobias Spintig, Mohamed Abou-Emara, Justus Lackmann, Wolf-Dieter Müller, Alireza Houshmand

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Maximum Insertion Torque of a Novel Implant-Abutment-Interface Design for PEEK Dental Implants

Andreas Dominik Schwitalla[1,3]
Tycho Zimmermann[1]
Tobias Spintig[1]
Mohamed Abou-Emara[2]
Justus Lackmann[2]
Wolf-Dieter Müller[1]
Alireza Houshmand[3]

[1] Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health,
Dental Materials and Biomaterial Research,
Department of Prosthodontics, Geriatric Dentistry and Craniomandibular Disorders
Aßmannshauser Str. 4-6
14197 Berlin
Germany

[2] Beuth University of Applied Sciences
Luxemburger Str. 10
13353 Berlin
Germany

[3] Charité – Universitätsmedizin Berlin, corporate member of Freie Universität Berlin, Humboldt-Universität zu Berlin, and Berlin Institute of Health,
Department of Prosthodontics, Geriatric Dentistry and Craniomandibular Disorders
Aßmannshauser Str. 4-6
14197 Berlin
Germany

Corresponding Author:
PD Dr. Wolf-Dieter Müller
wolf-dieter.mueller@charite.de
Phone: +49-30-450562769
FAX: +49-30-450562923

Abstract. Frequent reports attest to the various advantages of tapered implant/abutment interfaces (IAIs) compared to other types of interfaces. For this reason, a conical IAI was designed as part of the development of a PEEK (polyetheretherketone)-based dental implant. This IAI is equipped with an apically displaced anti-rotation lock with minimal space requirements in the form of an internal spline. The objective of this study was the determination of the average insertion torque (IT) at failure of this design, so as to determine its suitability for immediate loading, which requires a minimum IT of 32 N·cm.