‘A comparison of a proprietary and generic dental implant abutment connection using computerised microtomography (micro-CT).

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Abstract

Aim: To observe and assess the internal characteristics of a dental implant by comparing and contrasting the abutment-implant connection of a proprietary abutment connected to this implant and a generic abutment connected to this same implant.

Materials and Methods: Fourteen implant specimens (Neoss Dental Implants, North Yorkshire, UK) were used in total across two groups. Seven proprietary titanium abutments were connected to seven corresponding implants with a proprietary abutment screw (proprietary group); seven generic titanium abutments were connected to the remaining seven implants by a proprietary abutment screw (generic group). Specimens were scanned using computed microtomography (Skyscan 1076: Bruker microCT, Kontich, Belgium) and analysed qualitatively using processing software (Avizo 9.0: FEI, Oregon, USA).

Results: Proprietary implant-abutment connections were shown to be closely adapting, with no evidence of marginal gap horizontally or vertically. The unique Neoss implant-abutment connection contacts in half as many places as the generic implant-abutment connection. Generic implant abutment connections displayed marginal discrepancies in all seven specimens.

Conclusion: Within the limitations of this study, proprietary abutments demonstrated a superior fit compared with generic abutments. Marginal discrepancies between generic abutments and implants may have been reduced if implant replicas were not used as a starting point.

Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution, and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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Signed by: _____

Benjamin R Sellick

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