V Mostra de Pesquisa da Pós-Graduação

AVALIAÇÃO DA PRÉ-CARGA E TORQUE DE REMOÇÃO DE TRÊS TIPOS DE PARAFUSOS DE FIXAÇÃO DE PILARES PARA PRÓTESES UNITÁRIAS IMPLANTOSSUPORTADAS APÓS CICLAGEM MECÂNICA

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Resumo

Diante dos problemas relacionados às reabilitações implantossuportadas pode-se destacar o afrouxamento ou fratura dos parafusos de fixação. Dentre os fatores relacionados para prevenção da ocorrência destas falhas, destaca-se a necessidade de obtenção de ótima pré-carga, sendo esta, primeiramente dependente do torque aplicado no parafuso. Assim, este estudo *in vitro* teve como objetivo comparar os valores de pré-carga e torque de remoção de três tipos de parafusos de fixação de pilares para próteses unitárias submetidos ao teste de ciclagem mecânica. Foram utilizados 10 implantes hexágono externo (Conexão®, Sistemas de Prótese Ltda., São Paulo, Brasil) com 4,0mm de diâmetro e 15,0mm de comprimento, nos quais foram cimentadas 30 coroas metálicas sobre *abutments* Cera One®, fixados com seus respectivos parafusos de ouro, titânio e titânio com tratamento de superfície (Torq-Tite®). Os parafusos foram inseridos e registrou-se a pré-carga inicial. Após cimentação das coroas, as amostras foram posicionadas na cicladora mecânica e submetidas a 400 mil ciclos com freqüência de 1 ciclo/segundo e força de 100N. Após o teste, foi avaliado o valor de pré-carga produzido com a utilização da célula medidora de carga e extensômetros. Para mensuração dos torques de aperto e remoção, utilizou-se dispositivo eletrônico de controle de torque. Os parafusos de ouro apresentaram os maiores valores de pré-carga (pré-ciclagem 341,00±78,53; pós-ciclagem 284,60±72,81) em relação aos parafusos de titânio (pré-ciclagem 235,00±27,39; pós-ciclagem 196,00±29,66) e tratado (pré-ciclagem 284,00±70,92; pós-ciclagem 195,00±69,28). Para os valores de torque de remoção, os maiores registros foram encontrados para o grupo titânio (21,00 ± 0,79), seguido do grupo ouro (18,06 ± 1,94) e tratado (16,64 ± 1,38). Após análise estatística, foram encontradas diferenças significativas entre os três

grupos para pré-carga, pré e pós-ciclagem e torque de remoção. Devido aos maiores valores de pré-carga obtidos nos resultados do estudo, sugere-se que os parafusos de ouro sejam os mais indicados para obtenção de estabilidade da junta *abutment*-implante e maior longevidade dos tratamentos reabilitadores com coroas unitárias.

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