

Implantes

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A linha de implantes AllPrime Select é a mais nova aliada dos cirurgiões-dentistas que buscam por produtos de alta qualidade com o melhor custo-benefício, unindo sucesso clínico e econômico nos seus casos. AllPrime Select foi desenvolvida pensando nas mais importantes tendências e características da implantodontia moderna.

Neste caderno científico você encontra estudos e pesquisas com as principais evidências que comprovam a qualidade dos implantes AllPrime Select.

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LONG-TERM RETROSPECTIVE STUDY OF IMPLANTS PLACED AFTER SINUS FLOOR AUGMENTATION WITH FRESH-FROZEN HOMOLOGOUS BLOCK

Livingstom Rubens Sousa Rocha, Antonio Carlos Aloise, Rafael de Mello Oliveira, Marcelo Lucchesi Teixeira, André Antonio Pelegrine, Luís Guilherme Scavone Macedo

Abstract

Aim: The aim of this study was to analyze and follow-up implants placed in the posterior maxillary regions previously grafted with homologous bone. **Materials and Methods:** Forty-one grafts with homologous bone blocks were performed in maxillary sinuses, and 121 implants were placed in premolar and molar regions approximately 6 months after the grafts. Patients were followed up for periods varying from 12 to 124 months after rehabilitation. **Results:** The results showed two implant failures, for a 98.3% success rate during the follow-up period. **Discussion:** The implants placed had an average torque of 40 N-cm, regardless of the design, diameter, and length of the implants used. **Conclusion:** After following up on the implants placed in this study, we concluded that those placed in regions of the maxillary sinuses previously grafted with homologous bone blocks had high long-term success rates and met the functional masticatory requirements.

[Link para a pesquisa](#)

AVALIAÇÃO DO TORQUE DE INSERÇÃO DE UM NOVO DESENHO DE IMPLANTE ÓSSEointegrável

Thiago Barros Campos, Ana Paula Moro Quinteiro, Ana Paula Farnezi Bassi, Daniela Ponzoni, Paulo Sérgio Perri de Carvalho

Resumo

Objetivo: avaliar o torque de inserção de um novo desenho de implante. **Material e métodos:** pacientes foram recrutados para instalação de implantes, no período de março a dezembro de 2015. Dados como o diâmetro, o comprimento do implante, a sequência de fresagem, a área de instalação e o torque atingido foram considerados. A avaliação do torque foi realizada com um torquímetro cirúrgico. **Resultados:** foram avaliados 82 implantes, com diâmetros entre 3,5 mm e 5 mm, e comprimentos entre 7 mm e 16 mm, sendo instalados 46 implantes na mandíbula e 36 implantes na maxila. Os torques (média ± desvio-padrão) alcançados foram de $53 \pm 9,9$ Ncm para maxila e $57 \pm 11,3$ Ncm para mandíbula. **Conclusão:** o sistema de implantes promoveu torque de inserção adequado, com boa estabilidade primária nos implantes.

[Link para a pesquisa](#)

THE EFFECT OF CONTROLLED MICROROBOTIZED BLASTING ON IMPLANT SURFACE TEXTURING AND EARLY OSSEointegration

Luiz F Gil, Charles Marin, Hellen Teixeira, Heloisa F Marão, Nick Tovar, Rehan Khan, Estevam A Bonfante, Malvin Janal, Paulo G Coelho

Abstract

Surface topography modifications have become a key strategy for hastening the host-to-implant response to implantable materials. The present study evaluated the effect of three different carefully controlled surface texture patterns achieved through micro robotized blasting (controlled to high, medium and low roughness) relative to a larger scale blasting procedure (control) in early osseointegration in a canine model. Four commercially pure grade 2 titanium alloy implants (one of each surface) were bilaterally placed in the radii of six beagle dogs and allowed end points of 1 and 6 weeks *in vivo*. Following sacrifice, implants in bone were non-decalcified processed for bone morphologic and histometric (bone-to-implant contact; bone area fraction occupancy) evaluation. Surface topography was characterized by scanning electron microscopy and optical interferometry. Results showed initial osteogenic tissue interaction at one week and new bone in intimate contact with all implant surfaces at 6 weeks. At 1 and 6 weeks *in vivo*, higher bone-to-implant and bone area fraction occupancy were observed for the high texture pattern micro robotized blasted surface relative to others.

[Link para a pesquisa](#)

BIOMECHANICAL EVALUATION OF UNDERSIZED DRILLING ON IMPLANT BIOMECHANICAL STABILITY AT EARLY IMPLANTATION TIMES

Paulo G. Coelho, Charles Marin, Hellen S. Teixeira, Felipe E. Campos, Julio B. Gomes, Fernando Guastaldi, Rodolfo B. Anchieta, Lucas Silveira, Estevam A. Bonfante

Abstract

Purpose: The present study evaluated the effect of different drilling dimensions (undersized, regular, and oversized) in the insertion and removal torques of dental implants in a beagle dog model. Methods: Six beagle dogs were acquired and subjected to bilateral surgeries in the radii 1 and 3 weeks before euthanasia. During surgery, 3 implants, 4 mm in diameter by 10 mm in length, were placed in bone sites drilled to 3.2 mm, 3.5 mm, and 3.8 mm in final diameter. The insertion and removal torque was recorded for all samples. Statistical analysis was performed by paired t tests for repeated measures and by t tests assuming unequal variances (all at the 95% level of significance).

Results: Overall, the insertion torque and removal torque levels obtained were inversely proportional to the drilling dimension, with a significant difference detected between the 3.2 mm and 3.5 mm relative to the 3.8 mm groups ($P < 0.03$). Although insertion torque-removal torque paired observations was statistically maintained for the 3.5 mm and 3.8 mm groups, a significant decrease in removal torque values relative to insertion torque levels was observed for the 3.2 mm group. A different pattern of healing and interfacial remodeling was observed for the different groups. Conclusions: Different drilling dimensions resulted in variations in insertion torque values (primary stability) and stability maintenance over the first weeks of bone healing.

[Link para a pesquisa](#)

CARACTERIZAÇÃO E AVALIAÇÃO DA BIOCOMPATIBILIDADE DO TITÂNIO SUBMETIDO A DIFERENTES TRATAMENTOS DE SUPERFÍCIE

Samuel Porfírio Xavier

Resumo

O objetivo do presente estudo foi avaliar a biocompatibilidade do Ti com diferentes tratamentos de superfície utilizando cultura de osteoblastos. As superfícies dos discos de Ti comercialmente puro foram preparadas por meio de usinagem (T1), usinagem + HNO₃ (T2), usinagem + jateamento com Al2O₃ (T3) e usinagem + jateamento com Al2O₃ + HNO₃ (T4). As superfícies foram avaliadas quanto a rugosidade e a topografia. Osteoblastos obtidos pela diferenciação de células de medula óssea de ratos foram cultivados sobre discos de Ti e os seguintes parâmetros foram avaliados adesão e proliferação celular, medida de proteína total, atividade de fosfatase alcalina e formação de nódulos de matriz mineralizada. Os dados foram comparados por meio de ANOVA. Não houve diferença nas superfícies quanto a rugosidade e observou-se, por meio de microscopia eletrônica de varredura, que T3 e T4 mostraram topografia mais irregular. Tanto a adesão após 4 e 24 horas como a proliferação celular após 7, 14 e 21 dias não foram afetadas pelos tratamentos de superfície. A quantidade de proteína total avaliada na superfície T4 foi menor do que nas outras superfícies após 14 e 21 dias de cultura. Não houve diferença entre as superfícies na atividade de fosfatase alcalina nos períodos de 14 e 21 dias. A formação de matriz mineralizada após 21 dias de cultura foi menor sobre as superfícies T3 e T4. Estes resultados sugerem que estes tratamentos de superfície com jateamento ou a combinação do jateamento e ataque ácido interferem negativamente com a biocompatibilidade do Ti.

[Link para o estudo](#)

MECHANICAL TESTING OF IMPLANT-SUPPORTED ANTERIOR CROWNS ON DIFFERENT IMPLANT/ABUTMENT CONNECTIONS

Erika O. Almeida, Amilcar C. Freitas Jr, Estevam A. Bonfante, Leonard Marotta, Nelson R.F.A. Silva, Paulo G. Coelho

Abstract

Purpose: This study evaluated the reliability and failure modes of anterior implants with internal-hexagon (IH), external-hexagon (EH), or Morse taper (MT) implant-abutment interface designs. The postulated hypothesis was that the different implant-abutment connections would result in different reliability and failure modes when subjected to step-stress accelerated life testing (SSALT) in water. Materials and Methods: Sixty-three dental implants (4×10 mm) were divided into three groups ($n = 21$ each) according to connection type: EH, IH, or MT. Commercially pure titanium abutments were screwed to the implants, and standardized maxillary central incisor metallic crowns were cemented and subjected to SSALT in water. The probability of failure versus number of cycles (95% two-sided confidence intervals) was calculated and plotted using a power-law relationship for damage accumulation. Reliability for a mission of 50,000 cycles at 150 N (90% two-sided confidence intervals) was calculated. Polarized-light and scanning electron microscopes were used for failure analyses. Results: The beta values (confidence intervals) derived from use-level probability Weibull calculation were 3.34 (2.22 to 5.00), 1.72 (1.14 to 2.58), and 1.05 (0.60 to 1.83) for groups EH, IH, and MT, respectively, indicating that fatigue was an accelerating factor for all groups. Reliability was significantly different between groups: 99% for MT, 96% for IH, and 31% for EH. Failure modes differed; EH presented abutment screw fracture, IH showed abutment screw and implant fractures, and MT displayed abutment and abutment screw bending or fracture. Conclusions: The postulated hypothesis that different implant-abutment connections to support anterior single-unit replacements would result in different reliability and failure modes when subjected to SSALT was accepted.

[Link para o estudo](#)

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Adolfo Embacher Filho

Resumo

A partir de observações nas alterações ósseas em um crânio seco implantado em vida, com vinte e sete pinos autopenetrantes, que o levou a recorrer a microscopia eletrônica de varredura, o autor faz uma retrospectiva histórica das duas correntes existentes na implantologia, lança mão de trabalhos da literatura e conclui pela supremacia da osseointegração em detrimento da osseofibrointegração como resposta biológica desejável na implantologia.

[Link para o artigo](#)



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0800 702 0227