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**L'ODONTOIATRIA
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SALUTE

CONFOCAL LASER MICROSCOPE EVALUATION OF PEEK ABUTMENTS ROUGHNESS

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Aim: the relationship between implant abutments and soft tissues constitutes a protective barrier to separate peri-implant bone from the oral environment. Customized prosthetic abutments could be realized with several materials: metals, ceramics, hybrid materials and composites.

Among composite materials, the High Performance Polymer, based on a polyether-ether-ketone (PEEK) polymer, was introduced as an innovative alternative to titanium. Many studies highlighted a decrease in the risk of marginal bone loss and soft tissue recession in PEEK abutments compared to those in titanium.

The aim of this study was to evaluate the surface characteristics of PEEK abutments for CAD/CAM milling.

Methods: measurements of roughness were made in three areas of PEEK abutments (2.7 mm height, 3.22 diameter) (Bredent, Senden, Germany), using the Confocal Laser Microscope. The two parameters considered: Ra (absolute distanc-

es of roughness profile from the center line) and Rz (maximum peak-to-valley of five consecutive sampling lengths) were measured in vertical and horizontal axis. A DICe software was used to present confocal measurement data as a differential interference contrast image.

Results: in horizontal axis the values of Ra and Rz were: $0,082\mu\text{m} \pm 0,017\mu\text{m}$ and $0,503\mu\text{m} \pm 0,113\mu\text{m}$. In the vertical axis, the measurements Ra and Rz were: $0,361\mu\text{m} \pm 0,241\mu\text{m}$ and $0,788\mu\text{m} \pm 0,233\mu\text{m}$. The Ra and Rz means were: $0,116\mu\text{m} \pm 0,06\mu\text{m}$ and $0,661\mu\text{m} \pm 0,274\mu\text{m}$. The 3D profiles presented good smoothness surface characteristics.

Conclusion: the roughness profile showed to be appropriate for realization of prosthetic abutments because of its capacity to enhance fibroblast cells adhesion and growth. Moreover, the analysis of literature highlighted the characteristics of biocompatibility and excellent chemical and color stability of this material.

PRADER-WILLI SYNDROME: ORAL FINDINGS

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Aim: Prader-Willi syndrome is a rare multisystemic genetic disorder caused by lack of expression of certain paternal genes located on chromosome 15.

The syndrome, associated to hypothalamic and pituitary dysfunction, is characterized by severe neonatal hypotonia and feeding problems. Neonatal hypotonia is followed, during childhood by hyperphagia and obesity. In addition, hypothalamic alterations can cause intellectual disability, behavioral problems, a high pain threshold, respiratory sleep disorders. The aim of this work is to evaluate the main dental aspects and the therapeutic implications.

Methods: an analysis of the literature was performed using databases.

Results: common clinical findings: gingivitis and periodontitis, dental and skeletal malocclusions, enamel hypoplasia, tooth wear and dental erosion, bruxism, xerostomia, candidiasis and angular cheilitis, high risk of caries and increased DMFT score. The typical poor oral hygiene in PWS patients is related to qualitative-quantitative changes in saliva and incoordination in tooth brushing.

Conclusion: it is necessary to motivate family and patient to maintain oral hygiene. Due to the various systemic and dental problems, a six-monthly follow-up is required since early childhood. Dental treatment purposes require a multidisciplinary approach which includes periodontal and conservative cares. In prosthetics, we suggest the use of removable dentures because of the difficulty in maintaining oral hygiene.