



CBCT Images Processing Systems in modern implant-prosthetic therapy

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Abstract

Digital techniques based on processing of CBCT images are a new trend in the modern implant-prosthetic therapy. These techniques are recommended for the analysis and planning of the surgical pro-implant and implant stage. Using these techniques, implantology specialists and oral surgeons can optimize their therapeutic decisions regarding the pro-implant and implant stages, with implementation of more safe and accurate execution of the surgical and implant procedures. Digital systems for the analysis of CBCT images (Planmeca Romexis 3D, CS9300) are used for evaluation of the quality and volume of implant sites as well as for measuring distances to anatomical elements that must be avoided during implant procedures (sinus cavity, mandibular canal). Expert applications also use CBCT images for the assessment of mucosal and bone support, planning of bone addition procedures and positioning of dental implants (Implant 3D, Universe; NobleGuide, Nobel Biocare; Digital Smile Design, DSD; SimPlant, Dental Materialize; Virtual Implant Placement, BioHorizons; ImplantMaster, iDent; Implant 3D, Media Lab; EasyGuide, Keystone Dental). 3D Navigation systems (Robodent; X-Guide) that use CBCT images has been introduced to assist the implantology specialists both in planning and execution of the implant surgical procedures. The benefits of these systems are as follows:

real-time visualization of the depth and angle of the burr; fully automatic recording of the patient and of the procedures applied; one software for planning and navigation; extensive collection of generic implants and implants; measurement and analysis of bone density. Published studies demonstrate the increase in the long-term success rate in digital-assisted implant-prosthetic therapy and sustain the expansion of the digital applications in the contemporary implant-prosthetic therapy. concluded that the use of these techniques helps to make pure source of L-DOPA implemented in the prevention of Parkinson's disease.

Biography

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Publication of speakers

- Suresh Suryawanshi et al ; Myocardial infarction in children: Two interesting cases, 2011 Jan 4
- Suresh Suryawanshi et al ; The Many Facets of Erythropoietin Physiologic and Metabolic Response, 2020 Jan 17
- Suresh Suryawanshi et al ; Rational use of intravenous polymyxin B and colistin: A review, 2018 Oct 5

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