

The use of stereolithography in surgical implant placement: A case report

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Abstract

Rapid prototyping is a method of producing solid physical copies of human anatomy from 3D computer data. Stereolithography is the most widely known and used rapid prototyping and the one most often technique used to generate medical models and computer-generated surgical guides for osteotomy site preparation in dental implant surgery. SurgiGuides are the computer-designed and stereolithography-generated surgical guides used during osteotomy site preparation. Stereolithography interfaces a patient's 3D CT study with the SimPlant plan. Made of acrylic resin, SurgiGuides contain one or more steel drilling sleeves, each of a defined diameter and with minimal tolerance, to control and ensure the accuracy of each osteotomy site preparation in two planes- buccolingually and mesiodistally.

SurgiGuide design is based on the presurgical 3D positioning of implant icons using SimPlant (Materialise) interactive software, which transfers the prosthetically driven surgical treatment plan onto the CT. SurgiGuides can be supported by bone, teeth, teeth and mucosa, mucosa, or supragingival pre-existing dental implant components and mucosa. This article presents a case for teeth and mucosa supported implant placement for mandible, and bone supported for maxilla for the aim of complete oral rehabilitation with implants.



Biography

Zainbganayah Sulaimani is an implantologist who has been practicing implant dentistry since 2011. Dr. Sulaimani is 1992 graduate from King Saud university, in the capital Riyadh, Saudi Arabia. Dr. Sulaimani is a member of SDS Saudi dental society, and KSA Implant club. Dr. Sulaimani worked in ministry of health M.O.H for 26 years, during these years she believes strongly in the value of continuing education. As she finished 4 years of (SBARD) Saudi Board in Advanced restorative Dentistry since 2007. In 2011 she had fellowship in Implant dentistry (SF.). Now dr. Sulaimani has experience in practicing implant surgery in esthetic & non esthetic zone, since 9 years ago.

