



American Academy of Maxillofacial Prosthetics
70th Annual Meeting: October 21 – 24, 2023
Omni San Diego Downtown, San Diego, California

Program Speaker – Samuel Richards

Title

The Use of Computer Aided Design in Orthognathic Surgery for the Completely Edentulous Maxilla

Abstract

Conventional treatment of the Skeletal Class III malocclusion often requires concerted orthodontic realignment of the compensated dentition along with either single- or two-jaw orthognathic repositioning of the maxilla and/or mandible. This orthognathic movement and stabilization is aided by specialty ligatures which are either tied through and around the orthodontic hardware or, in cases without pre-surgical orthodontics, around the cervical necks of the teeth. This is further stabilized by interdental splints which maintain the relationship of the dentition in some clinical cases.

In either instance, this maxillomandibular surgery appears to have the prerequisite of orthodontic brackets and /or teeth, seemingly precluding the completely edentulous patient from the treatment modality. However, this presentation highlights the surgical possibilities that can be afforded to the completely edentulous patient by leveraging digital dental design to manufacture implant-supported prostheses to aid in the predictable movement and stabilization of the surgical orthognathic patient. The result of which was a patient whose facial profile and maxillomandibular relationships were idealized, leading to a more esthetic and manageable permanent fixed prosthesis.

Biography

Dr. Samuel Richards received his Doctor of Dental Surgery Degree (DDS), Certificate in Prosthodontics, and a Master of Science at the University of Maryland, School of Dentistry. Following his graduate and post-graduate training, Dr. Richards completed a 1-year sub-specialty fellowship in Maxillofacial Prosthetics at the Naval Postgraduate Dental School, Bethesda, MD.

Throughout his professional career, he has served numerous roles in both the military and private sectors, to include Deputy Director of Dental Services-Walter Reed National MilitaryCenter, Assistant Director of AEGD and GPR programs, and Associate Professor and Chair of Fixed Prosthodontics at the Naval Postgraduate Dental School, in addition to maintaining a full-time clinical practice focused on both prosthodontic and maxillofacial rehabilitative care.

Dr. Richards currently serves as Program Director of the Naval Postgraduate Dental School's Maxillofacial Prosthodontics Fellowship and supports a 1-day/week private practice in the DC-Metro area.