EuroSciCon

VALIDATION OF A DIGITIAL FACEBOW: A COMMUNICATION TOOL FOR IMPLANTOLOGY

L.Kalman

Assistant Professor, Restorative Dentistry
Faculty Lead, Dental Outreach
Schulich School of Medicine & Dentistry
Western University
1151 Richmond Street
N6A-3K7
London, Ontario, Canada
519-636-6933
519-661-3416 (fax)
ljkalman@icloud.com

Abstract (not more than 300 words)

Communication between the clinician and technician has been an ongoing problem in dentistry. To improve the issue, a dental application and process has been developed and patented. The application has been designed as a digital replacement of the analogue facebow, used to orient the maxillary cast in mounting. The technology offers an efficient, accurate and cost-effective digital companion to the diagnoses and treatment planning of implant cases, providing critical clinical information for the clinician, patient and laboratory in the mounting and assessment of casts and occlusion. The analogue and digitized facebow have been clinically compared to assess the spatial orientation of casts, accuracy in maxillo-mandibular relations, and time and cost required for utilization. Data indicates the digitized facebow, compared to the analogue, provided increased precision in spatial mounting, increased accuracy in occlusion, reduced time and cost. Occlusal accuracy and total time were statistically significant ($P<0.05$). The digitized facebow represents an accessible technology that provides clinical information with increased accuracy, reduced time and cost as compared to the analogue instrument. The approach offers an improved experience for the clinician and patient and offers another avenue for communication, with the opportunity to reduce adjustments and remakes of prosthetics.



Keywords—communication, digital dentistry, prosthodontics, virtual facebow

Professional Biography (100-150 words)

Les completed a BSc (Hon) & DDS at Western followed by a GPR at the London Health Sciences Centre. He maintained a full-time solo private practice with an emphasis on digital dentistry, prosthodontics and medical device research. Kalman transitioned to full-time academics as an assistant professor and outreach coordinator. Kalman's research focuses on medical devices & technologies relevant to clinical dentistry. He has authored over 30 articles, holds two patents and has translated two technologies. He is an active member of the Academy of Osseointegration, the International Congress of Oral Implantologists, the Standards Council of Canada and serves on the Board of Directors for the University of Western Ontario Faculty Association. He has been recognized as an Academic Associate Fellow (AAID), Fellow, Master and Diplomate (ICOI), has been awarded the Schulich Alumni of Distinction Award and most recently the Merck *Patients First* award.



Email Id: ljkalman@icloud.com

Any Comments:

This is original exploratory research.