

Scientific Abstracts from the Seventh Annual American College of Oral and Maxillofacial Surgeons ACOMS Residents Meeting November 10–11, 2018, Texas A&M College of Dentistry, Dallas, TX, USA

The Seventh Annual American College of Oral and Maxillofacial Surgeons (ACOMS) Residents Meeting convened November 10–11, 2018, at the Texas A&M College of Dentistry. Special thanks are owed to the scientific chair for the meeting, Dr. Robert Strauss, and the host advisor, Dr. Andrew Read-Fuller.

All attendees were invited to submit scientific abstracts for oral presentation at the meeting. All accepted abstracts were eligible for publication. The winner for Outstanding Scientific Abstract was awarded a travel scholarship to attend the ACOMS 40th Annual Scientific Conference and Exhibition to convene April 7–9, 2019 in Santa Fe, NM, USA. We are pleased to announce the winner of the Resident Abstract Competition:

Outstanding Scientific Abstract

Hybrid arch bars reduce placement time and glove perforations compared to Erich arch bars during the application of maxillomandibular fixation: a randomized controlled trial

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EXPLORING TRAINING DENTAL IMPLANT PLACEMENT USING COMPUTER-GUIDED IMPLANT NAVIGATION SYSTEM

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Purpose: This prospective randomized study was designed to evaluate the learning progression, defined as accuracy in

placement of dental implants on a simulation model, when a computer-guided dynamic navigation was used to train senior dental students with no previous implant training. The study was designed to define the learning curve and the minimal number of attempts necessary in utilizing computer-guided implant navigation system to improve implant placement skill in a novice implant trainee.

Methods: A total of 5 implant placement attempts were assigned to each student. The first 4 attempts were randomly assigned for placing either 3 maxillary or 4 mandibular implants. A randomization schedule was generated in SAS EG v6.1 software (Opware Inc.) to assign all students to a random sequence of the first 4 jaws (2 for maxilla and 2 for mandible), as well as the implant sites within each jaw for all attempts. The spatial relationship between the JagTag on the stent installed on a plastic model and the DrillTag on handpiece was tracked by the stereoscopic camera. Repeated measures analysis of variance was used to evaluate discrepancies in the 2-dimensional (2D) lateral deviation, overall 3-dimensional (3D) apex deviation, 2D vertical apex deviation, and overall 3D angle deviation.

Results: Fourteen students participated, with a mean age of 26.1 years and equal males and females. Mean time for implant placement was associated with attempt number ($P < .001$), implant site ($P = .010$), and, marginally, related to gender ($P = .061$). Students had a significant reduction in time from their first attempt to their second (10.6 vs 7.6 minutes; adjusted $P < .001$) then plateaued. Overall 3D angulation ($P < .001$) and 2D vertical apex deviation ($P = .014$) improved with each attempt, but changes in lateral 2D ($P = .513$) and overall 3D apex deviations ($P = .784$) were not statistically significant. The site of implant placement was associated with lateral 2D, 2D vertical, and overall 3D apex deviations ($P < .001$). Males were marginally faster than females, had slightly lower overall 3D angulation, and reported higher proficiency with video games. Novice operators improved significantly in speed and angulation deviation within the first 3 attempts of placing implants using dynamic navigation.

Conclusions: Novice operators learn the skill of placing implants with dynamic navigation within 3 attempts. The speed and angulation deviation improve significantly within the first 3 attempts and are sustained. Performance for males, on average, was marginally better in time and accuracy than females.

HYBRID ARCH BARS REDUCE PLACEMENT TIME AND GLOVE PERFORATIONS COMPARED TO ERICH ARCH BARS DURING THE APPLICATION OF MAXILLOMANDIBULAR FIXATION: A RANDOMIZED CONTROLLED TRIAL BRETT KING, DDS, AND BRIAN CHRISTENSEN, DDS, MD, LOUISIANA STATE UNIVERSITY HEALTH SCIENCES CENTER, NEW ORLEANS, LA, USA

Purpose: The use of a bone-fixed hybrid arch bar system provides an alternative method to Erich arch bars to apply maxillomandibular fixation (MMF) during the treatment for

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8 February 2019/25 February 2019

2212-4403/\$-see front matter

<https://doi.org/10.1016/j.oooo.2019.02.026>