AAMP 2024
CONFERENCE PROGRAM

AMERICAN ACADEMY OF MAXILLOFACIAL PROSTHETICS

THE WORLD OF MAXILLOFACIAL PROSTHETICS

Naples Grande Beach Resort, Naples, Florida

NOVEMBER 3-5, 2024

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AAMP2024

Naples, Florida USA | November 3 - 5, 2024

Welcome Colleagues
to the 71st Annual Meeting of the

American Academy of Maxillofacial Prosthetics

Conference Dates: November 3-5, 2024
Naples Grande Beach Hotel
Naples, Florida USA

2024 Conference Title:

The World of Maxillofacial Prosthetics

RES SEMINARS / AAMP CONFERENCE ADMINISTRATION
4425 Cass St. Suite A. San Diego, CA 92109
T: 858-272-1018 F: 858-272-7687
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www.maxillofacialprosthetics.org

AAMP Mission Statement

We are an association of prosthodontists who are engaged in the art and science of maxillofacial prosthetics. The AAMP is committed to championing patient care by inspiring education, research, public awareness, members success, and setting standards for Maxillofacial Prosthetics.

The Academy is devoted to the study and practice of methods used to habilitate esthetics and function of patients with acquired, congenital and developmental defects of the head and neck; and of methods used to maintain the oral health of patients exposed to cancer-cidal doses of radiation or cytotoxic drugs.

Membership Information

If you are interested in becoming a member, attending our Annual Meeting is the best way to become familiar with the membership and educational process. Please see the following membership tracks for the AAMP:

• *Affiliate* • *Associate* • *Full Fellow* • *Allied Health* • *Student*
•Retired Life

Individuals eligible for membership in the AAMP include:
• Licensed dentists in good standing in the country in which they practice and retain citizenship
• Persons licensed, registered or otherwise permitted by law to practice as dental or maxillofacial prosthetic technicians who are involved in only non-independent or indirect patient care as directed or prescribed by a licensed dentist
• Graduates of Maxillofacial Prosthetic programs
• Graduates of Residencies
• Student Membership is also available.
If you are interested in becoming a member, please see the AAMP web site to apply: www.maxillofacialprosthetics.org

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AAMP 2024 PRESIDENT'S WELCOME

Welcome to the 71st Annual Meeting of the American Academy of Maxillofacial Prosthetics (AAMP) in beautiful Naples, Florida! As your President, one of my key agendas this year is to continue globalizing the AAMP. The theme of this year's meeting, "The World of Maxillofacial Prosthetics," reflects our commitment to embracing prosthodontists from around the globe. Our diverse lineup of speakers from various countries underscores this global acceptance and collaboration.

Organizing and running our annual meeting is truly a team effort. I extend my heartfelt thanks to Dr. Joseph DiFazio, our Program Chair, for assembling a fantastic list of speakers. His dedication and hard work have been instrumental in bringing together such a distinguished group of professionals. A special thank you goes to Dr. Jim Kelly, our Executive Secretary Treasurer, for being a pillar of the AAMP and organizing the business meeting and the Presidential Dinner. Additionally, as Fellowship Chair, he has played a crucial role in ensuring the progression of our fellows within the organization. Dr. Richard Cardoso, Chair of the Corporate Liaison Committee, deserves recognition for his efforts in securing sponsors for this meeting. His work has been essential in making this event possible. I would also like to thank Dr. Tanya Somohano-Marquez, Chair of the Poster Competition Committee, for organizing an enjoyable and engaging poster competition. Her efforts have provided a platform for showcasing innovative research and ideas.

I am also grateful to Dr. Suresh Nayar, Chair of the Website and Social

Media Committee, for effectively advertising our annual session. His efforts have significantly increased our visibility and engagement. His work as Chair of the Strategic Alliances Committee is essential in expanding our collaboration with other organizations around the world. I also want to express my gratitude to Immediate Past President Dr. Theresa Hofstede, who chairs the Nomination and Awards Committee. Her diligent work in nominating our upcoming leaders and selecting worthy award recipients has been invaluable to our organization. Dr. Candice Zemnick, Chair of the Memorial Committee, has done a commendable job in honoring and organizing tributes for our beloved members who have passed on. Her work ensures that their memories are cherished and celebrated.

Dr. Olivia Muller, Chair of the Student Membership Committee, has been instrumental in encouraging student membership and organizing the student breakfast. Her work is vital in nurturing the next generation of professionals in our field. I also want to acknowledge Dr. Akanksha Srivastava, Chair of the Silent Auction Committee, for its continual growth and successful integration into a virtual environment. Her innovative approach has ensured the continued success of this important fundraising activity. Last but not least, our partner, RES Seminars, whose assistance was essential in actualizing this event.

Thank you all for attending our annual meeting here in Naples, Florida. Welcome to the AAMP family! Let's make this a memorable and impactful conference together.
Warm regards,

Alvin G. Wee, DDS, PhD, MPH
President, American Academy of Maxillofacial Prosthetics

Dr. Wee completed his dental degrees at the National University of Singapore and Creighton University. He completed his prosthodontic residency and a MS degree at the University of Iowa, followed by a maxillofacial prosthetics fellowship at the University of Pittsburgh Medical Center. He further pursued part-time degrees, earning a MPH from The Ohio State University and a PhD degree from the University of Nebraska.

He began his professional career at The Ohio State University College of Dentistry, where he was eventually promoted to Associate Professor with tenure. His academic career continued at the University of Nebraska Medical Center (Department of Otolaryngology – Head and Neck Surgery), Creighton University, and Director of the Division of Prosthodontics at the University of Minnesota. Currently, he is a Full Professor with tenure and Chair of the Department of Restorative Dentistry at the University of Washington School of Dentistry. He also holds the Washington Dental Service Endowed Chair in Dentistry. Dr. Wee continues to be affiliated part-time with the Veterans Affairs Health Care System, where he treats patients with complex oral rehabilitation needs, including those with head and neck cancer, facial trauma, and obstructive sleep apnea.

Dr. Wee has received research funding as a principal investigator and co-investigator from the National Institutes of Health, the Department of Veterans Affairs, and several other agencies, totaling more than $2.6 million in grant funding. He has authored more than 110 peer-reviewed publications, 65 peer-reviewed

abstracts, 23 non-refereed publications, chapters in three textbooks, and one eBook. Dr. Wee is also Honorary Treasurer for the International Academy of Oral and Facial Rehabilitation and sits on the Board of Directors for the American College of Prosthodontists as Director of the Prosthodontic Forum. He is one of three Assistant Editors of the Journal of Prosthetic Dentistry and has reviewed for more than 20
peer-reviewed journals.

AAMP 2024 Program Chair's Welcome

It's our pleasure to welcome you to this year's American Academy of Maxillofacial Prosthetics 2024 Annual Session in Naples, Florida.

This year's program is THE WORLD OF MAXILLOFACIAL PROSTHETICS.

We come together from around the world to explore the latest innovations, advancements, and research in the field of Maxillofacial prosthetics. The presenters will provide a unique platform for Maxillofacial Prosthodontics practitioners, educators, students and other healthcare professionals to gain knowledge. They will be sharing their expertise and discussing the future of Maxillofacial prosthetic care worldwide.

We have an exciting global program ahead featuring many informative presentations. It will offer hands-on workshops and networking opportunities designed to inspire and grow collaborations. We hope you find the session both educational and motivating, as we continue to advance the standards of patient care in our specialty.

Thank you again for joining us and we look forward to an enriching and successful meeting. And also, thanks again to all of our Presenters.

Warm regards,

Dr. Joseph DiFazio

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Thomas J. Salinas, DDS.....	2021 Virtual Meeting
Joseph M. Huryn, DDS.....	2022 Austin, TX
Theresa M Hofstede.....	2023 San Diego, CA

**Denotes Deceased*

We thank all past AAMP Presidents for their dedication and service.

MEETING DEDICATION

Richard J. Grisius (87) passed away peacefully on July 7, 2023 with his wife, Sylvia, lovingly by his side.

Richard was born in Chicago in 1935 as the only son of Lithuanian immigrants, Stanley and Magdalena. He was raised in Chicago where he developed lifelong friendships and a regard for hard work and an appreciation for education. He often told the story of fibbing about his age to get his first job on the loading dock. More stories followed of working in a cannery, as a service station attendant and a caddie. He was a proud product of his Jesuit education, attending Loyola Academy, Loyola University and Loyola School of Dentistry.

It was in high school that he met the love of his life, Sylvia Williams, when they were just 15 and 16. They married on July 4, 1959 and departed the next day for his first assignment in the U.S. Navy.

His 26 year naval career involved duty in Taiwan, Great Lakes, IL, the aircraft carrier USS Shangri-La (CVA38), Mayport, FL and then the National Naval Dental School, Bethesda MD for a Prosthodontics residency. After an assignment with the Second Marine Division, he returned to Bethesda for a residency in Maxillofacial Prosthetics. He subsequently was appointed as the director of Graduate Prosthodontics at the National Naval Dental School. During this time, he earned a Masters in Higher Education from George Washington University and was promoted to Captain.

His last duty assignment was as Chief of Dental Service and mentor for the General Practice Residency program at the Oakland Naval Hospital in Oakland, CA. In recognition of his meritorious service, he was awarded the Navy and Marine Corps Commendation Medal.

He retired from the Navy in the Fall of 1981 and joined the staff at Georgetown University as Director of Graduate Prosthodontics. In 1990, when Georgetown School of Dentistry announced its closure, he became the Director of Dental Medicine and Surgery at Geisinger Medical Center in Danville, PA. After retiring from Geisinger Medical Center, he instructed at the Graduate Prosthodontic program at the University of Maryland on a part time basis.

Richard served as president of the American Academy of Maxillofacial Prosthetics in 1988 and was recipient of its prestigious Ackerman Award in 1995. He was an examiner on the American Board of Prosthodontics from 1991 to 1998 and served as president from 1997 to 1998. He also had the honor of serving as the president of the Academy of Prosthodontics from 2001 to 2002. He was a fellow in the American College of Prosthodontics. Among his many academic accomplishments, he published numerous professional journal articles and textbooks chapters.

While his professional achievements were notable, his stated greatest accomplishments were the bonds he formed with his family, colleagues, residents, patients, and friends. Richard had a prodigious work ethic that he instilled in all of his children. While he was often serious and focused on accomplishments, he also knew how to live in the moment and appreciate the simple joys of

life. He had a gregarious nature and loved to tell jokes and share laughter. No one was a stranger to Richard, and he treated everyone with equal respect. He was a generous and caring person who earnestly embraced his roles as husband, father, grandfather, doctor, teacher, mentor, and friend.

Richard is survived by his devoted wife, Sylvia, his eldest son Richard of Bethesda, MD, his daughter, Margaret (Stephen) of McLean, VA, Michael (Rhonda) of Vienna, VA, Thomas (Heidi) of Purcellville, VA, and Timothy (Charis) of Bethesda, MD. He was blessed with 11 grandchildren: Nicholas, Nathan, Katie, Stephen, Julia, Matthew, Clayton, Henry, Isabel, Audrey, and David.

Richard loved Sylvia dearly; she was the light of his life. Her strength and devotion caring for him over the last 19 years since his cancer diagnosis were truly extraordinary, and their relationship was one he cherished. Richard touched the lives of so many - he will never be forgotten.

2024 Scientific Program Overview

SUNDAY, NOVEMBER 3, 2024	
7:00-15:00	AAMP Officer & Board of Directors Meeting (Invite only)
12:00-16:00	Sponsor & Exhibit Set-Up
16:30-17:30	Industry Presentations
16:30-17:00	**Imetric 4D Imaging** Why Full-Arch Needs True Photogrammetry The Ultimate Digital Impression Technology
17:00-17:30	**Rob Christensen (CranioRehab)** New Technologies for Cleft & Craniofacial Orthopedics and Orofacial Rehabilitation
16:30-17:30	Poster Presentation Set-Up
17:30-20:00	**Poster Session & Exhibit Reception**
MONDAY, NOVEMBER 4, 2024	
7:00-8:00	Continental Breakfast in Exhibit Hall
8:00-08:15	Welcome, Dedication and Presidential Award

	Scientific Presentations - Session I
8:15-8:55	**Rodrigo Salazar Gamarra** 3D Facial Scanning from Static to Dynamics
9:00-9:40	**Banu Karayazgan** Digital Approach in Maxillofacial Prosthodontics: Understanding our Limits
9:40-10:40	**AAMP Business Meeting** (Members Only)
09:40-11:00	**Break and Visit with Exhibitors**
	Scientific Presentations - Session II
11:00-11:40	**Ansgar C. Cheng / Tan Kian- Meng** Maxillofacial Prosthetics Over the Other Side of the Planet: COVID-19 Edition
11:40-12:25	**Mohamed Moataz Khamis** Maxillofacial Prosthetics: The Digital Transformation
12:30-14:00	**Luncheon Presentation Sponsored by Legally Mine** **Presented by Gary Harker** Proper Use of Legal Entities for Lawsuit Protection and Tax Reduction

14:00-14:15	**Break and Visit with Exhibitors**
	Scientific Presentations - Session III
14:15-14:55	**Fumi Yoshioka** Analysis of Facial Movement and Skin Texture for Fabricating Facial Prosthesis using 4D Facial Expression Models
15:00-15:40	**Beata Sawczuk and Teresa Sierpinska** Changes in the Oral Cavity Millieu, Habits and Quality of Life with Neoplasm Post OP Patients with Acrylic Prosthetic Restoration
15:45-16:25	**Gurkaran Preet Singh** Functional Outcomes After Resection of Tongue Cancer Determining the Optimal Endpoint After Prosthetic Rehabilitation: A Tata Memorial Centre Experience
19:00-20:00	**AAMP Reception with Exhibitors** (close of Silent Auction)
20:00-23:00	**AAMP Presidential Banquet** (Elective)

TUESDAY, NOVEMBER 5, 2024	
7:00-8:00	Continental Breakfast in Exhibit Hall
7:00-8:00	Student / New Member Breakfast
	Scientific Presentations – Session IV
8:00-8:40	**Sanketh Kethireddy** Impression Verses Scan in Maxillofacial Prosthetics
8:45-9:25	**Ibrahim Doğan** Success Criteria of Obturator Prosthesis and Turkey's Perspective
9:30-10:10	**Richard Cardoso and Holly McMillan** When MIO Goes MIA- The Joint Search Party
10:15-10:55	**Edmond Pow** Advancements in Maxillofacial Prosthodontics: A 30- Year Journey in Hong Kong
10:55-11:00	**AAMP 2025 Preview:** New Orleans, LA USA
11:00-11:30	**Break and Visit with Exhibitors**
	Scientific Presentations – Session V

11:35-12:15	**Joshua Vess and Patricia Walworth** Maxillofacial Prosthetics with a Global Mission
12:20-13:00	**Sarah Kay Youny Lee and Thomas Salinas** Evolving Lessons on Prosthetic Rehabilitation in Different Maxillary Reconstructions
13:00-13:30	**Harry Reintsema** Development of Maxilofacial Prosthetics in the Netherlands
13:30-13:35	**ECJPD Sponsored Poster Competition Awards**
14:30-16:30	**Southern Implants Workshop** Pterygoid Implants for Rehabilitation of the Atrophic Maxilla and Maxillectomy Defects: Hands On Surgical and Prosthetic Techniques (Elective)
14:30-16:30	**Technovent Workshop** Step -by-Step Guide to the Construction of a Magnet Retained Facial Prosthesis (Elective)
17:00-19:00	**AAMP Networking Farewell** Reception on Sunset Veranda (Elective)

MONDAY, NOVEMBER 4, 2024	
	Scientific Presentations - Session I
8:15-8:55	**Rodrigo Salazar Gamarra** 3D Facial Scanning from Static to Dynamics

Abstract

The shift from 3D static to 4D dynamic clinical data acquisition will allow maxillofacial rehabilitation that aligns with the patient's physical appearance and meets the full range of facial expressions and functional jaw movements. In the near future, this technological progress in customization and authenticity will significantly enhance the well-being of cancer patients, providing them with a restored sense of self-assurance and normality.

Biography

Dr. Salazar-Gamarra is a consultant in technological innovation for health and was awarded by MIT Technology Review as a 2018 Humanitarian Innovator for Latin America for his work as director, treasurer, and researcher of the "lnstituto Mais

Identidade (+ID)" in Sao Paulo, Brazil, a nonprofit organization that rehabilitates low-income people with facial cancer sequelae.

He is a volunteer researcher at the Technological Center of the Renato Archer Institute (CTI), a public institution of the Brazilian Ministry of Science, Technology and Innovation. He has served as past president of the International Association of Anaplastology (IAA) 2020-2021 and current vice president of the Latin American Society of Maxillofacial Rehabilitation (rBMF) 2018-2024. He has received the category of "Honorary Member 2020" of the Mexican College of Maxillofacial Prosthesis and also the "Honor of Merit" from the Legislative Assembly of the State of Parana for his research with decontamination agents during COVID-19, 2020.

He is Research Professor at the "Universidad Cientifica del Sur" in Peru. Professor in the Postgraduate School of the Universidad Peruana Cayetano Heredia and Professor in the Digital Dentistry Course of the Universidad Peruana de Ciencias Aplicadas UPC.

Co-founder and CEO of M3D, a social enterprise of virtual planning and medical 3D printing, in Peru Co-founder of e-Clinic in Peru. Co-founder of Rehabilite-me in Brazil. Co-founder of Rehabilitation Bucomaxillofacial in Peru.

9:00-9:40	**Banu Karayazgan** Digital Approach in Maxillofacial Prosthodontics: Understanding our Limits

Abstract

In the evolving field of maxillofacial prosthodontics, the integration of digital technology has significantly broadened the scope of patient care. Advanced digital technologies are revolutionizing this workflow; however, acknowledging the limitations of these advancements is essential. This presentation focuses on the current state of digital technology in the field of maxillofacial prosthetics, highlighting both its advantages and challenges. It also emphasizes the role of digital solutions in enhancing the efficiency of clinical practice and collaboration.

Biography

Dr. Banu Karayazgan serves as a Professor and Interim Chair of the Department of Prosthodontics at the University of Pittsburgh School of Dental Medicine. Concurrently, she holds the role of Clinical Director within the Maxillofacial Prosthodontics Department at UPMC Presbyterian Hospital. She instructs both predoctoral and graduate students, and she delivers lectures and courses in national and international levels.

Dr. Karayazgan earned her DDS degree from Istanbul University, School of Dentistry, in 1997 and completed the residency program in Prosthodontics and

Maxillofacial Prosthodontics in 2005. She was selected for the ITI (International Team for Implantology) scholarship program at the Center for Implant Dentistry, University of Florida, USA, in 2004.

Prior to her current role, she held positions as Professor and Chair of the Prosthodontics Department at Istanbul Okan University, School of Dentistry. She also owns a private dental clinic in Turkey that specializes in treating patients with maxillofacial defects.

Dr. Karayazgan has previously served as the Chair and Education Delegate of ITI Turkey and Azerbaijan Section. She also led the task force group for ITI-Woman and remains an integral member of the ITI-Woman and Women in Implantology Network global core group. She is a Fellow of the ITI-USA Section and a registered speaker.
Her primary areas of interest include intraoral and extraoral implantology, digital dentistry, and maxillofacial prosthodontics.

11:00-11:40	**Ansgar C. Cheng / Tan Kian- Meng** Maxillofacial Prosthetics Over the Other Side of the Planet: COVID-19 Edition

Abstract
At the start of this decade, COVID-19 has given us a rude shock in human's recent history. The world turned upside down. How we live, communicate, travel and learn is no longer the same. It was no different for those involved in maxillofacial prosthetic services and education.

In Asia, dental education stopped for at least two months in Singapore and Hong Kong. The effect of this disruption reverberated after that. In this presentation, we will share the challenges we faced during these troubled times, how we overcame them through multi-institutional collaboration and technology, as well as the learning points we gathered from our journey. We hope that this model can be replicated through 'normal' post-pandemic time.

Biography

Dr. Ansgar C. Cheng is a Maxillofacial Prosthodontist with Specialist Dental Group, a Prosthodontic Specialty Board Examiner with the Royal College of Dentists of Canada and an Adjunct Associate Professor with the National University of Singapore and the University of Hong Kong.

Dr. Cheng received his dental training from the University of Hong Kong (1990) and his specialty training in Prosthodontics from Northwestern University, Chicago (1992). He pursued his sub-specialty training in Maxillofacial Prosthodontics at UCLA (1993). He is a Fellow of the Academy of Medicine, Singapore, the Royal College of Dentists of Canada, and the Royal Australasian College of Dental Surgeons. He is also a Member of the Royal Australasian College of Dental Surgeons (Prosthodontics).

Dr. Cheng spent 11 years in Toronto, Canada where he was the Head of Maxillofacial Prosthetics at the Princess

Margaret Hospital, a Consultant to the Department of Otorhinolaryngology (ENT) at the Toronto General Hospital, and an Assistant Professor of Prosthodontics with the University of Toronto. Dr. Cheng served on the Singapore Dental Specialist Accreditation Board and is a member of the Dental Specialist Assessment Committee (Prosthodontics).

In addition to his clinical work, Dr. Cheng also served on the Editorial Board for the Journal of Prosthetic Dentistry, the International Journal of Prosthodontics, and the Singapore Dental Journal. He has published widely in peer-reviewed journals and speaks regularly internationally.

Biography

Dr. Tan Kian-Meng is a Maxillofacial Prosthodontist with Specialist Dental Group. He is also an Adjunct Lecturer at the National University of Singapore, a Visiting Consultant at regional hospital, Khoo Teck Puat Hospital (most biophilic hospital in Asia), and was the President of the Prosthodontic Society Singapore.

Dr. Tan Kian Meng received his dental training from the National University of Singapore (2005) and his specialty training in Prosthodontics from the University of Maryland, USA (2010). He is the valedictorian of his class. He has received numerous academic awards, including the Lee Kuan Yew Medal for being the best overall graduating student in the dental class and

Tratman Medal, for being the most distinguished graduate.

Before joining Specialist Dental Group, Dr. Tan was with Khoo Teck Puat Hospital (the latest 800 bed hospital) as a Consultant and a post-graduate Fellow at the University of Texas, MD Anderson Cancer Center's Maxillofacial Prosthetics and Oncologic Dentistry (2011). He is a Diplomata of the American Board of Prosthodontics. He is a Fellow of the Academy of Medicine, Singapore and the American College of Prosthodontists. Dr. Tan has a special interest in maxillofacial prosthetics and implant dentistry. He is currently an examiner with the Prosthodontic Specialty Board in Singapore. In addition, he is also an ad-hoc reviewer for the Journal of Prosthodontics.

11:40-12:25	**Mohamed Moataz Khamis** Maxillofacial Prosthetics: The Digital Transformation

Abstract
The field of maxillofacial prosthetics has undergone a major digital transformation in the past few years revolutionizing most of the conventional techniques and procedures. New materials and production techniques have also been introduced to match the digital era.

CAD-CAM technology has originally transformed prosthodontics and consequently impacted both intraoral and extraoral maxillofacial restorations. Digital impressions using different types of scanners are replacing conventional impressions in many clinical

situations improving patient acceptance and satisfaction and simplifying the procedures for both the maxillofacial patient and clinician. Different CAD softwares have replaced conventional designing steps, shortening the procedure time and improving the final outcome. Digital manufacturing whether additive or subtractive has also significantly impacted the final outcome.

The current presentation will review the digital transformation taking place in both intraoral and extraoral prostheses, highlighting the current status and future perspectives.

Biography

Professor Khamis graduated from Alexandria University in 1990 where he obtained his Masters degree in Prosthodontics in 1994. He then moved to the University of Pittsburgh Medical Center in 1995 where he finished 2 years of residency and fellowship in maxillofacial prosthetics. He then went back to Alexandria University where he attained his PhD degree then was promoted till becoming a Professor of Prosthodontics in 2008. From 2011-2014 he was appointed Vice Dean of the Faculty of Dentistry. In 2019 he became the Chairman of the Department of Prosthodontics at the Faculty of Dentistry, Alexandria University which he is still holding till now.

He is the founder and director of the comprehensive dental implant certificate program which is a one year fellowship program that started in 2004 and has been

going on till now for 20 years. In 2019 he also became the director of the Clinical Masters of oral implantology program at the Faculty of Dentistry, Alexandria University.

He is a member of the editorial reviewing board of multiple journals including the Journal of Prosthetic Dentistry and BMC Oral Health and has reviewed in multiple national and international peer-reviewed journals. He contributed in 4 chapters in 2 textbooks related to dental implants published by quintessence and Springer. He has over 60 publications in the field of dental implants, prosthodontics, maxillofacial prosthetics and dental lasers. He has over 100 presentations in national and international meetings and is a fellow of multiple national and international associations including the ICD and IAOFR.

14:15-14:55	**Fumi Yoshioka** Analysis of Facial Movement and Skin Texture for Fabricating Facial Prosthesis using 4D Facial Expression Models

Abstract
Facial prosthesis has been conventionally fabricated on the cast made from either conventional or digital impressions without facial expression. Successful facial prosthetic rehabilitation can be achieved when patients can appear in public without fear of attracting unwanted attention. However, patients often suffer from anxiety that their facial prostheses may fall off because of complex movement with

facial expressions. The marginal sealing of a facial prosthesis should be successfully acquired. In order to fabricate well-fitted facial prostheses, we have applied “4D facial expression models” which include the movement involved with facial expression by using a process known as morphing and tried to fabricate facial prostheses based on the 4D facial expression models. In addition to movement of facial skin, skin texture such as skin viscoelastic property is an important to be considered for well-fitted facial prosthesis. In this presentation, the concept of 4D facial expression models and fabrication of facial prostheses using 4D facial expression models will be described, followed by report the relationship between facial movement and skin texture as well as between skin texture and retention of facial prosthesis using 4D facial expression model.

Biography

Fumi Yoshioka received her D.D.S. degree from Tohoku University, Sendai, Japan in 2000 and her Ph. D. from Tokyo Medical and Dental University, Tokyo, Japan in 2004. Her major there was a maxillofacial prothodontics. After couple of years work as a clinical staff of the Maxillofacial Prosthetics Clinic in Tokyo Medical and Dental University, she moved to Chicago, USA to join the maxillofacial prosthodontic fellowship program in University of Illinois at Chicago. After coming back to Japan, she started her career at School of Dentistry, Aichi Gakuin University in Nagoya, Japan April 2007.

She is currently a board member of Japanese Academy of Maxillofacial Prosthetics.

15:00-15:40	**Beata Sawczuk and Teresa Sierpinska** Changes in the Oral Cavity Millieu, Habits and Quality of Life with Neoplasm Post OP Patients with Acrylic Prosthetic Restoration

Abstract

Surgical treatment of head and neck neoplasms gives rise to a major loss in the number of tissues. At the same time, it generates changes in the prosthetic surface. In many countries prosthetic rehabilitation using removable restorations has still been the only solution enabling the reconstruction of deficient tissues and teeth. The oral cavity constitutes an environment where a great deal of biochemical processes take place. Under physiological conditions, an equilibrium takes place between the synthesis and accumulation of reactive oxygen species (ROS) in cells and tissues and the antioxidant system's capability of their eliminating. ROS are natural products. At physiological levels, they play a crucial part in the normal functions of a variety of cellular processes. Every disbalance between the production of ROS and the efficacy of antioxidant systems leads to an oxidative stress. This, in turn, results in damages in key cell macromolecules, i.e. DNA, proteins and lipids. More and more data indicate ROS as a causative factor in the neoplastic transformation of the cells. High

levels of ROS in neoplastic cells may induce the following: cellular adaptation, the elevation of proliferation rate, mutations in DNA accompanied by the genome instability, as well as resistance to some classes of drugs used in the treatment of neoplasms. Consequently, each of the aforementioned may promote the neoplasm's development.

Study Aim:
The study was aimed at evaluating selected parameters of oxidative stress in the saliva of oncological patients treated with removable acrylic restorations. Furthermore, it assessed their quality of life and nutritional habits.

Material and Methods:
The study material was provided by stimulated and non-stimulated saliva collected from 25 patients operated on due to a neoplasm prior to prosthetic treatment and after the elaborating of acrylic prostheses. The control group was represented by 25 edentulous patients with no diagnosed neoplastic disease. The following have been assessed in the salivary supernatant: the levels of non-enzymatic antioxidants – uric acid (UA), reduced glutathione (GSH) and oxidated glutathione (GSSG); the levels and activities of antioxidant enzymes by means of colorimetric and fluorometric methods – glutathione peroxidase (GPx), catalase (CAT), superoxide dismutase (SOD); total antioxidant status (TAS), total oxidant status (TOS) and total antioxidant capacity (TAC). The following validated questionnaires were used in the study: EORTC QLQ-C30 , QLQ-H&N35.

Results:
Several findings based on conducted studies were of note. The parameters of oxidative stress changed over respective time intervals. Furthermore, compared to the control group, a reduced adaptation to prostheses and an inconsiderable modification of nutritional habits in the arm of oncological patients were found.

Conclusions:
Removable acrylic restorations have still been commonly used in a number of countries. They contribute to changes in biochemical processes of the oral cavity, improve the quality of life and patients' nutritional preferences.

Biography
Dr. Beata Sawczuk graduated from the Faculty of Medicine with the Department of Dentistry at the Medical University of Bialystok, Poland in 2001. She has been professionally associated with her Alma Mater from the very beginning. Employed at the Department of Dental Prosthetics as an assistant. She completed specialist studies in the field of Prosthodontics in 2008 and her doctoral thesis in 2009. She combines professional work with scientific development, continuing to expand her knowledge through specialized courses and conferences. Her professional interest are related to the rehabilitation

of patience after the surgical procedures and impact on improving the quality of life. She cooperates with the Clinic of Maxillofacial Surgery and Laryngology. She is a member of the Regional Medical Chamber in Bialystok and the European Association of Prosthodontists.

Biography

Prof. Teresa Sierpinska: 33-year-experience in the field of prosthetic dentistry, since 2018 the Head of Department of Prosthetic Dentistry, Medical University of Bialystok, Poland, National Consultant in Prosthetic Dentistry (cooperation with Polish Ministry of Health), the President of Board responsible for National Specialty Certificate Examination at Medical Examination Centre, Poland, Associate Dean for Educational Affairs at Faculty of Medicine and Dentistry in Medical University of Bialystok. The President of Prosthetic Section of Polish Dental Association, President of European Prosthodontic Association

The main field of interest: physiology of masticatory system, occlusion, tooth wear, interdisciplinary oral rehabilitation.

Academic Achievements: 108 published papers, IF = 59,7; h- index 12, co-author of the book: Handbook of research on clinical applications of computerized occlusal analysis in dental medicine, by RB. Kerstein, Chapter: Tooth wear: prevention, treatment, and monitoring using the T-Scan/BioEMG synchronization

module, IGI Global, USA, second edition in 2020, the member of the editorial board of CRANIO, Journal of Stomatology, Prosthodontics

15:45-16:25	**Gurkaran Preet Singh** Functional Outcomes After Resection of Tongue Cancer Determining the Optimal Endpoint After Prosthetic Rehabilitation: A Tata Memorial Centre Experience

Abstract

Background: Total glossectomy is a functionally-debilitating condition which affects speech articulation, deglutition, and overall quality of life of the patient. Surgical reconstruction using pedicel flaps or microvascular fascio-cutaneous flaps and/or, prosthetic rehabilitation using tongue prosthesis (TP) with/ without palatal augmentation prosthesis (PAP) are currently the mainstay in functional rehabilitation of this cohort.

Aims: The aim of the study is quantitative assessment and comparative evaluation of functional outcomes after resection of tongue cancer in patients undergoing prosthetic rehabilitation. The study will report our institutional experience about the optimal end-point in functional outcomes after glossectomy. We will also report on the significance of inter-disciplinary management and the role of video fluoroscopy (VFS) in the assessment of functional parameters related to swallowing (number of swallows, amount of material swallowed, pooling in the oral and pharyngeal

cavities, risk of aspiration) in patients undergoing total glossectomy before and after the prosthetic rehabilitation.

Methods: Head and neck cancer patients who had undergone surgery for tongue cancer in the past and who were referred/ reported to Dental and Prosthetic Services, Tata Memorial Hospital for rehabilitation between 2012 to 2022 were included. Socio demographic information, primary disease-and-treatment-related details, prosthetic rehabilitation related details were recorded from patient's file, electronic data management software (EMR) and/or historical data maintained in the department. As an institutional protocol, these patients underwent speech and swallowing assessment by a trained speech language pathologist before and after the prosthetic rehabilitation. Descriptive statistics were calculated according to standard procedures. Data analysis was carried out using SPSS (SPSS 24.0, IBM, NY, USA).

Results: A total of 70 patients with a previous history of glossectomy surgery underwent prosthetic rehabilitation within the study period. There were significant differences seen in various speech parameters in the cohort at baseline (pre-prosthesis), when stratified according to socio-demographic and clinical variables such as type of glossectomy, radiation therapy (+/-) and reconstruction (+/-). There were significant differences observed in the certain speech parameters when compared before and after the prosthetic rehabilitation. VFS assessment revealed

that there was an improvement in the ability to eat higher quantities of food of different consistencies with a decrease in the oral transit time after prosthetic rehabilitation. The amount of tongue resection (oral tongue vs base of tongue) had a profound effect on the prosthetic outcome.

Conclusion: Surgery for tongue cancer leads to significant effect on functional outcomes. Prosthetic rehabilitation can have psychological as well as functional impact on the overall outcome. The role of inter-disciplinary management is paramount to achieve favorable outcomes. VFS serves as an objective means in understanding the physiology of deglutition after prosthetic rehabilitation following glossectomy.

Biography

Dr. Gurkaran Preet Singh (MDS in Prosthodontics, Affiliate Fellow of American Academy of Maxillofacial Prosthetics, (AAMP) is an Associate Professor in the Department of Dental and Prosthetics Surgery at Tata Memorial Hospital, Mumbai. He has a cumulative experience of more than eleven years as a Specialist Prosthodontist. He completed Fellowship in Dental and Prosthetic Oncology from Tata Memorial Hospital in 2017. He is the Founder Member, and Secretary of the Association of Prosthetic and Dental Oncology (ADPO). He is also an executive committee member of the Mumbai-Navi Mumbai branch of the Indian

Prosthodontic Society. His expertise includes dental implant-supported prosthetic rehabilitation of head and neck cancer patients, oral manifestations of systemic oncologic therapy, and medication-related osteonecrosis of jaws. He is a member of the American Society of Clinical Oncology and the International Society of Maxillofacial Rehabilitation.

TUESDAY, NOVEMBER 5, 2024	
	Scientific Presentations – Session IV
8:00-8:40	**Sanketh Kethireddy** Impression Verses Scan in Maxillofacial Prosthetics

The field of maxillofacial prosthetics demands precision and meticulousness to restore both form and function to patients with facial defects. Central to this process are the techniques used to capture the patient's anatomical information accurately. This lecture delves into the comparative analysis of traditional impression-taking methods versus modern digital scanning technologies in the context of maxillofacial prosthetics.

The lecture begins with an overview of the historical evolution of impression techniques and their significance in maxillofacial prosthetics. Traditional methods, such as alginate and silicone impressions, are discussed in terms of their advantages, limitations, and common challenges encountered in clinical practice. Emphasis is placed on the skill and

experience required for successful impression-taking and the importance of patient comfort and cooperation.

The discussion then transitions to the emergence of digital scanning technologies and their integration into maxillofacial prosthetics workflows. Various types of intraoral and extraoral scanners are examined, highlighting their capabilities, accuracy, and efficiency compared to traditional impressions. The benefits of digital scans, including reduced patient chair time, enhanced accuracy, and seamless integration with CAD/CAM systems, are underscored.

Next, the lecture explores the practical considerations involved in choosing between impression and scanning techniques for specific clinical scenarios. Factors such as the nature of the defect, patient comfort, time constraints, and cost-effectiveness are evaluated to guide clinicians in selecting the most appropriate method.

Furthermore, the lecture addresses the challenges and opportunities presented by the transition from analog to digital workflows in maxillofacial prosthetics. Topics include staff training, equipment investment, data management, and quality assurance protocols to ensure the seamless adoption of digital technologies.
Finally, the lecture concludes with a forward-looking perspective on the future trends and innovations in impression and scanning techniques for maxillofacial prosthetics. Anticipated advancements

in scanning technology, materials, and software integration are discussed, along with their potential implications for clinical practice and patient outcomes.

Overall, this lecture provides a comprehensive framework for understanding the nuances of impression versus scan techniques in maxillofacial prosthetics, equipping clinicians with the knowledge and insights needed to navigate the evolving landscape of digital dentistry and optimize patient care.

Biography

Dr. Sanketh Kethireddy is the Consultant & Director at Apollo Dental Centres and the course director of the fellowship in implantology program in the Tamil Nadu Dr. M.G.R. Medical University, Chennai, India.

Dr. Reddy graduated from RAGAS Dental College, Tamil Nadu Dr. M.G.R. Medical University, Chennai, India in 2001. Following his B.D.S. degree, he continued to study prosthodontics and obtained his M.D.S. degree in 2004. After that, Dr. Reddy acquires his Graduate Diploma of Clinical Science and Master of Science in Dentistry (Maxillofacial Prosthodontics) degree from Mahidol University, Faculty of Dentistry, Bangkok, Thailand. On top of that, he also obtained his certification in implant dentistry from UCLA, the USA in 2008.

He is the Secretary of the Indian Prosthodontics Society and also the treasurer for the Tamil Nadu branch. In addition, Dr. Reddy is an executive member of the Asian Academy of Prosthodontics and the Executive Council Member of the Indian Dental Association. Currently, He is the Treasurer of the Indian Prosthodontic Society.

He is a full-time consultant at Apollo Dental Centres and Apollo Specialty Cancer Centre, Chennai. He also runs an exclusive Prosthetic Rehabilitation Practice at The Maxillofacial Prosthetic Rehabilitation Centre, Chennai.Specialized in Maxillofacial Prosthetics, Dental Oncology, and implantology, Dr. Sanketh Kethireddy has conducted various research and publications on these matters.

**Has disclosed Affiliation/Financial Interest with the following company: Apollo Dental Centres*

8:45-9:25	**Ibrahim Doğan** Success Criteria of Obturator Prosthesis and Turkey's Perspective

Abstract
Obturator prostheses are prosthetics used to cover defects in the palatal region and correct oral function. There are several reasons for the formation of defects in the palatal region. In the success criteria for obturator prostheses, various factors such as diagnosis and planning, functional aspects, aesthetics, material selection, prosthesis design,

and the materials used can be discussed. Additionally, it should be noted that the changing psychological conditions of patients due to illness directly impact the success of treatment. Obturator prostheses are usually the last-line treatment method in the treatment of such patients; therefore, the success of obturator prostheses also affects the success of the treatments applied to the patient from the beginning.

In this presentation, I will present the success criteria for obturators used to treat palatal defects in patients who have undergone surgery due to maxillofacial tumors. I will focus on the psychological conditions of patients during the treatment process and how it affects the entire course of treatment. Moreover, in my presentation, I will talk about the treatment strategies for these patients in Turkey, aiming to provide you with a different perspective.

Biography

Dr. İbrahim Doğan was born in 1985 in Adana,Turkey. He completed his secondary and high school education at Adana Chamber of Commerce Anatolian High School. He began his studies at Istanbul University Faculty of Dentistry in 2004 and graduated in 2009. He started his Phd in the Department of Prosthetic Dentistry at the same faculty. During Phd, he worked on the prosthetic treatments of patients who have maxillectomy

surgery. He completed his Phd in 2017 by presenting his thesis on "Examination of the effect of prosthetic treatment with psychiatric findings, quality of life and depression on patients with oral cancer". While he has his own clinic, he still working collaboration with different hospitals in İstanbul. The majority of his patients are those who had undergone maxillectomy surgery.

9:30-10:10	**Richard Cardoso and Holly McMillan** When MIO Goes MIA- The Joint Search Party

Abstract

Multidisciplinary team models have existed in oncologic care for decades, but how do we elevate our care and shift to interdisciplinary and transdisciplinary care models? At MD Anderson Cancer Center, the sections of Oral Oncology and Speech Pathology formally combined forces in 2020 to form a dedicated, multidisciplinary Trismus Clinic (TC). This dedicated service model has created new evaluation/treatment algorithms and referral patterns to better accommodate heterogeneous etiologies of trismus. Speakers will highlight (1) the administrative and expertise evolution over the last 5 years, highlighting the pearls and pitfalls of growing into an inter- and transdisciplinary service line, (2) research outcomes, and (3) further expansion of this service line as it embraces advanced prosthetic rehabilitation for speech and swallowing outcomes for patients with head and neck cancer.

Biography

Dr. Cardoso is an Associate Professor in the Department of Head and Neck Surgery, Section of Oral Oncology and Maxillofacial Prosthodontics at MD Anderson Cancer Center in Houston, Texas. He is the Director of Oral Oncology Didactic Training Program. Dr. Cardoso specializes in the oral morbidities and oral rehabilitation of the cancer patient. He co-created the Interdisciplinary Trismus Clinic, a collaborative effort between Oral Oncology and Speech Pathology, in which holistically treating all etiologies of trismus, including lymphedema and muscle pain.

Dr. Cardoso serves on the Board of American Academy of Maxillofacial Prosthetics and a Fellow of the American College of Prosthodontics. His clinical interests include implant oral and facial prosthetic rehabilitation and reduction of the oral morbidities of cancer therapy.

Biography

Holly McMillan M.C.D. CCC-SLP, LMP, CLT is a Senior Speech Language Pathologist and Co-Director of Trismus Clinic at the University of Texas MD Anderson Cancer Center. She is a doctoral student at the University of Texas School of

Public Health, a licensed massage therapist, and certified lymphedema therapist with expertise in oncology and head and neck cancer rehabilitation.

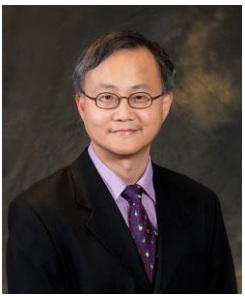
Ms. McMillan leads the manual therapy service lines within the head and neck surgery department and specializes in fibrosis and lymphedema management. She recently served as lead clinician on an NIH funded clinical trial examining manual therapy for late effect dysphagia and is a collaborator on several active NIH funded clinical trials in head and neck cancer survivorship.

10:15-10:55	**Edmond Pow** Advancements in Maxillofacial Prosthodontics: A 30- Year Journey in Hong Kong

Maxillofacial Prosthodontics emerged in Hong Kong during the late 1980s, marking the beginning of a transformative journey in the field. This lecture aims to provide the audience with a comprehensive overview of the development of Maxillofacial Prosthodontics in Hong Kong over the past three decades. The lecture will delve into the advancements made in the treatment of various congenital and acquired intra-oral and extra-oral defects, employing a wide range of prosthetic approaches, including fixed, removable, and implant-based solutions.

Furthermore, the lecture will shed light on our research contribution to minimizing post-

radiotherapy complications. It will highlight the utilization of the stem cell approach to enhance implant osseointegration in irradiated jaws, showcasing the potential for improved outcomes in this challenging patient population. Additionally, the lecture will underscore the integration of digital technology in maxillofacial prostheses and jaw reconstruction. It will demonstrate how digital technology can streamline the treatment process and enhance patient outcomes.



Biography

Dr. Pow is a tenured Clinical Associate Professor and the Postgraduate Programme Director in Prosthodontics at the Faculty of Dentistry, The University of Hong Kong. As a registered specialist in Prosthodontics, Dr. Pow has actively worked in various aspects of clinical prosthodontics for over 30 years. His research interests encompass digital prosthodontics, dental implants, and biomaterials.

Dr. Pow has published over 110 scientific and clinical articles. He was the recipient of the Judson C. Hickey Scientific Writing Award (Dental Technique Category) from the Journal of Prosthetic Dentistry in 2015. He currently serves on the editorial boards of Clinical Oral Implants Research, Journal of Prosthodontics, International Journal of Prosthodontics and International Dental Journal.

Dr. Pow holds leadership positions in various dental organizations. He presently serves as the President of the Prosthodontics Group of the International Association for Dental Research (IADR). He has also held significant roles, including Chair of IADR/AADR William J. Gies Award Committee, President of Hong Kong Prosthetic Dentistry Society, President of the College of Dental Surgeons of Hong Kong, Chair of the Asia Regional Committee of the Royal Australasian College of Dental Surgeons (RACDS), and a Member of NPAW Committee of American College of Prosthodontists.

11:35-12:15	**Joshua Vess and Patricia Walworth** Maxillofacial Prosthetics with a Global Mission

Abstract

As a part of the Defense Health Agency and the Uniformed Services University, the Air Force Postgraduate Dental School's Maxillofacial Prosthetics Fellowship aims to prepare Maxillofacial Prosthodontists to provide outstanding prosthetic care: Anytime, Anywhere—Always. Since 1984, our San Antonio based fellowship has been training military prosthodontists and has a storied legacy of caring for America's combat-wounded sons and daughters. An overview of the how the fellowship continues to leverage current technology to equip a new generation of Fellows to carry this legacy forward to ensure Soldiers, Sailors, Airmen, Marines, and Guardians serving anywhere can return to duty or to their families, with the aim of making them

"whole" again. Cases reports and research collaborations will be presented to represent the areas of concentration in our program.

Biography

Dr. Vess is the Program Director in the USAF Maxillofacial Prosthodontics Fellowship, San Antonio, TX. After studying at the Medical College of Georgia and entering the Air Force, he went on to advanced training in Advanced Education in General Dentistry, Prosthodontics, Global Health, and Maxillofacial Prosthetics. He and his wife, Kelly, have 6 children, and enjoy their never-ending project of restoring their 1900 Colonial Revival home in downtown San Antonio.

Biography

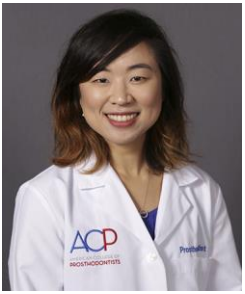
Dr. Walworth is the Deputy Director in the USAF Maxillofacial Prosthodontics Fellowship, San Antonio, TX. She entered the Army following Dental School at the Case Western Reserve University, Cleveland, OH. Since then, she has completed an AEGD-1, and earned a Prosthodontics Certificate and M.S. from USUHS in 2019. She has served as a clinical dentist, and most recently as the Assistant Director of the US Army Advanced Education in Prosthodontics residency. She and her husband, Joe, have two children, a full

zoo of animals, and are one of those families that enjoy running 5K on holidays.

12:20-13:00	**Sarah Kay Youny Lee and Thomas Salinas** Evolving Lessons on Prosthetic Rehabilitation in Different Maxillary Reconstructions

Abstract

Defects affecting the maxilla present with varying degrees of complexity in the prosthetic rehabilitation phase of care. Although reconstructive modalities that close a maxillary defect have broadened, each pathway presents with its own unique challenges to the prosthetic replacement of missing oral structures. In this joint presentation, Drs. Sarah Lee and Thomas Salinas discuss the advantages and disadvantages of different maxillary reconstruction approaches when diagnosing, treatment planning, and rendering prosthetic care. They will review evidence-based knowledge and corresponding clinical pearls that compare the spectrum of rehabilitative care experiences over time as reconstruction options and digital technologies have become integrated into the treatment process.



Biography

Dr. Sarah Kay Youny Lee is a maxillofacial prosthodontist who is board-certified in prosthodontics at the Mayo Clinic in the Division of Prosthetic Dentistry and Esthetics in the Department of Dental Specialties. She also serves as department's vice chair of education and associate program director of the maxillofacial prosthetics and dental oncology fellowship. Outside of Mayo Clinic, she is the social media editor for the Journal of Prosthetic Dentistry. Dr. Lee completed her formal dental training at the Adams School of Dentistry at the University of North Carolina. She also completed a general practice residency at the University of Michigan and practiced in public health dentistry. She then completed her advanced prosthodontics training and earned a master's degree in Oral Biology from UNC. Her maxillofacial prosthetics and dental oncology fellowship was completed at Mayo Clinic. Her specialty interest involves oral reconstruction with prosthetic rehabilitation and digital dentistry.

**Has disclosed Affiliation/Financial Interest with the following company: The Journal of Prosthetic Dentistry*

Biography

Thomas Salinas is Professor and Chair of Dental Specialties at the Mayo Clinic, where his time is dedicated to rehabilitation of patients with complex care needs. He has authored 95 publications related to prosthodontics and interdisciplinary care. His research interests are biomaterial behavior and clinical outcome studies. He is Board Certified in Prosthodontics and serves as an examiner for the American Board of Prosthodontics.

He is a fellow of the American College of Prosthodontists, The Academy of Prosthodontics, and Past President of American Academy of Maxillofacial Prosthetics. A native of New Orleans, Louisiana he was educated at Louisiana State University Health Science Center and MD Anderson Cancer Center.

13:00-13:30	**Harry Reintsema** Development of Maxilofacial Prosthetics in the Netherlands

Abstract

Development of maxillofacial prosthetics (MFP) in the Netherlands (dental/ prosthetic care for congenital and acquired conditions) was initially based on the financial reimbursement system in the Netherlands and is mainly provided in Institutes

called Centers for Special Dental Care. A national MFP training program has been established under the aegis of the NVGPT (the Dutch society on orofacial pain, restorative dentistry and prosthodontics) comprising a 4-year portfolio based training program obtaining clinical skills in one's home center and mainly plenary theoretical education (case presentations, webinars, masterclasses and workshops).

Mainly focusing on Head and Neck Cancer care in the UMCG some of the essentials in the development of MFP care will be highlighted, like the MFP-involvement in the head and neck team (from day 1 of admission), regarding dental issues in radiation therapy patients, regarding MD rehabilitation planning including use of implants in intraoral and extraoral rehabilitation, and final prosthodontic care. Some results of UMCG research will be shared.

Biography

- Graduated from Dental School in Groningen, The Netherlands in 1982, and defended his PhD-thesis ('the effect of fluoridated toothpastes on plaque covered enamel in vivo') Groningen, Jan 13th 1988.
- Assistant Professor Dental School University Groningen, 1982-1991.
- Maxillofacial Prosthodontist since 1984 (NVGPT-registered since 2000)
- Head of the UMCG Center for Special Dental Care and Maxillofacial Prosthetics (2003-2023).

- Chair training program Maxillofacial Prosthodontics UMCG since 2003.
- Chair of the NVGPT Dutch National MFP - Training Program Committee
- Past president International Society for Maxillofacial Rehabilitation (ISMR)
- Honorary member Dutch Society for Gnathology and Prosthetic Dentistry (NVGPT); served on the board of the from 1992- 2002
- Rewarded with the J.G. Schuiringa Award on maxillofacial prothetics (2000)
- (Co)author of several articles on maxillofacial rehabilitation and implant dentistry
- Participated in the organization of several conferences and workshops on maxillofacial rehabilitation.
- Fields of interest concern e.g. the dental/prosthetic treatment of Head-and-Neck Oncology patients and patients with congenital or acquired orofacial defects, and prosthodontic (implant-)treatment in general.

This continuing education activity has been planned and implemented in accordance with the standards of the ADA Continuing Education Recognition Program (ADA CERP) through joint efforts between The American College of Prosthodontists and The American Academy of Maxillofacial Prosthetics

The American College of Prosthodontists (ACP) is an ADA CERP Recognized Provider. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

Concerns or complaints about a CE provider may be directed to the provider or to ADA CERP at www.ada.org/cerp

The ACP designates this activity for up to 12.00 continuing education credits.

INDUSTRY PRESENTATIONS & WORKSHOPS

SUNDAY, NOVEMBER 3, 2024	
16:30-17:00	**Imetric 4D Imaging**
17:00-17:30	**Rob Christensen (CranioRehab)** New Technologies for Cleft & Craniofacial Orthopedics and Orofacial Rehabilitation

MONDAY, NOVEMBER 4, 2024	
12:30-14:30	**Gary Harker (Legally Mine) Lunch Presentation** Proper Use of Legal Entities for Lawsuit Protection and Tax Reduction

Company Description: Legally Mine is a legal services company designed to protect business and personal assets as well as finding legitimate means of lowering tax liabilities. The company has been in business in its current format since 2007 and currently has more than 12,000 clients primarily coming from the medical and dental communities. Our priorities are education of the medical and dental communities through our seminars

and preparing our clients to defeat both trial attorneys and over burdensome taxes.

Course description: Legally Mine will show you how to stop the threat of lawsuits before they ever get started by protecting your assets in time tested and proven legal structures. These same structures allow us to help our tax attorneys save what you would normally pay in income taxes. These are little known tax helps that have significant case history and have stood the test of time.

Biography
Gary Harker is the Director of Client Experience at Legally Mine. He and his wife have been married for 18 years and are the parents of 3 children. Mr. Harker is an entrepreneur, author licensed professional, creative director and educator for healthcare professionals. Speaking to audiences worldwide for more than 20 years, Gary is able to engage audiences on difficult subjects, taking the complex and making them palatable. As an entrepreneur Mr. Harker understands the necessity for Asset Protection first hand. Protecting the people closet to you, including your family, associates and employees

TUESDAY, NOVEMBER 5, 2024	
14:30-16:30	**Southern Implants Workshop** Pterygoid Implants for Rehabilitation of the Atrophic Maxilla and Maxillectomy Defects: Hands On Surgical and Prosthetic Techniques

Course description: Atrophic posterior maxilla, sinus pneumatization and maxillectomy defects are challenging factors in the rehabilitation of edentulous maxillae. Pterygoid implants provide a graftless approach to maximizing anteroposterior spread of implants and avoiding distal cantilevers. Successful pterygoid implant-based rehabilitation involves technique sensitive surgical protocols and requires a thorough understanding of the pterygomaxillary anatomy. This course will provide an overview of the advantages, anatomic considerations, and surgical and prosthetic treatment planning for placement of pterygoid implants. Attendees will be guided through two step by step hands-on surgical techniques for a deep conical internal connection and an angle corrected external hex pterygoid implant, and relevant prosthetic components.

Biography

Akanksha Srivastava, BDS, MSc, MDSc, FACP, FRCD(C), FAAMP Assistant Professor Division of Plastic Surgery, University of Illinois, Chicago Maxillofacial Prosthodontist, The Craniofacial Center University of Illinois Hospital and Health Sciences System, Chicago, Illinois. Dr. Akanksha Srivastava is a maxillofacial prosthodontist at the University of Illinois Health Craniofacial Center in Chicago. She is board-certified by the American Board of Prosthodontics and the Royal College of Dentists of Canada. She is a Diplomate of the American College of Prosthodontists and a Fellow of the American Academy of Maxillofacial Prosthetics. Dr. Srivastava earned her BDS degree with a dean's gold medal of honor from Dr. D.Y. Patil University, Navi Mumbai, India. She then went on to pursue a Master of Science degree at McGill University, Montreal, Canada

where she focused her research program on health economics data for implant treatment. She completed her prosthodontics residency, certificate in implant surgery and master's in dental science training from University of Connecticut. She further pursued a fellowship in Oral Oncology and Maxillofacial Prosthodontics from University of Texas MD Anderson Cancer Center. Dr. Srivastava works with the multidisciplinary team at the University of Illinois Health Craniofacial Center to provide care to children and adults with reconstructive needs, including cleft lip and palate, head and neck cancer, craniofacial trauma and other congenital and acquired orofacial conditions. She specializes in craniofacial implants and prosthetic rehabilitation, utilizing state-of-the art digital technologies to enhance her patient's oral rehabilitation outcomes. Her research program encompasses oral morbidities associated with oncologic treatment and outcomes in dental implantology. Dr. Srivastava has over 60 published books, book chapters, abstracts, and manuscripts and has won numerous awards for her academic achievements. She lectures nationally and internationally and is actively involved within the American College of Prosthodontists, American Academy of Maxillofacial Prosthetics, and American Academy of Fixed Prosthodontics.

TUESDAY, NOVEMBER 5, 2024	
14:30-16:30	**Technovent Workshop** Step -by-Step Guide to the Construction of a Magnet Retained Facial Prosthesis

Presented by Alan Bocca and Mark Waters

This workshop will cover all aspects of constructing a magnet retained facial prosthesis using

state-of-the-art techniques and materials. All areas will be covered from impression taking, carving and mould making right through to silicone selection/manipulation and colouring methods. The workshop will be a mix of presentations, live demonstrations, and hands-on segments to enable a full understanding of all key areas of prosthesis construction.

The workshop is aimed at those with some anaplastology experience who want to sharpen their skills with silicone, colouring and the use of magnets to retain prostheses. The presenters have a wealth of experience in silicone/colour science and anaplastology and the workshop gives the opportunity for the participants to ‘pick their brains’ in an informal atmosphere.

The workshop will include:

• Overview of Technovent magnet system, with an emphasis of the parts needed for different implant systems.

• Demonstration and hands-on session on impression technique for magnets with various implant systems.

• Carving and moulding tips/techniques and use of 3d scanning technology.

• Overview of silicone technology applicable to maxillofacial prosthesis, and correct selection of silicone for prosthesis making.

• Demonstration of various colouring techniques, including Spectromatch Eskin colouring technique

Prosthetically driven fully guided facial implant placement: A digital technique for improving the surgical and prosthetic outcome

Aggarwal, Himanshi
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Birmingham, AL United States

Author List: Himanshi Aggarwal, BDS, MDS; Zeina Al-Salihi BDS, MSc; Iradj Sooudi DMD DDS; Jay Ponto MD, DDS; Michael Kase, DDS, FAMP

Objective Prosthetically driven fully guided implant placement is a time-tested approach for successful outcome for intraoral prosthetics. However, the literature is scarce regarding using the virtual prosthetics and fully guided approach for facial/extraoral implant placement. Therefore, the objective of this poster is to present a technique for predictable implant placement using virtual prosthetics driven fully guided approach.

Case Presentation: A 66-year old female presented to Maxillofacial prosthetics clinic with history of orbital trauma 50 years ago, that was treated by orbital reconstruction with Titanium mesh and enucleation of left eye. The patient was wearing an ocular prosthesis since then, but due to severe

POST-ENUCLEATION EVISCERATION SOCKET SYNDROME, SHE WAS NOW UNABLE TO USE A CONVENTIONAL OCULAR PROSTHESIS. SHE HAS BEEN USING AN OCULAR PATCH TO COVER THE AFFECTED AREA. CLINICAL EXAMINATION REVEALED GRADE IV CONTRACTED SOCKET WITH SEVERE SUPERIOR SULCUS DEFORMITY.4,5 THE DEFECT WAS UNAMENABLE TO SOCKET RECONSTRUCTION FOLLOWED BY OCULAR PROSTHESIS AS THAT WOULD NOT CORRECT THE SUPERIOR SULCUS DEFORMITY, SO IT WAS MANDATED TO TRAT THE DEFECT AS AN EXENTERATION DEFECT. THEREFORE, THE OPTION OF IMPLANT SUPPORTED ORBITAL PROSTHESIS WAS GIVEN. TO FACILITATE PREDICTABLE IMPLANT PLACEMENT IN TERMS OF POSITION AND ANGULATION THAT WILL ENHANCE THE OUTCOME OF ORBITAL PROSTHESIS, IT WAS DECIDED TO USE A PROSTHETICALLY DRIVEN FULLY GUIDED IMPLANT PLACEMENT APPROACH USING AUTOCLAVABLE METAL GUIDE FABRICATED BY UTILIZING A COMBINATION OF CBCT (BONE ASSESSMENT), FACIAL SCAN (FOR CAPTURING THE CONTRALATERAL NORMAL ORBITAL STRUCTURE), REALGUIDE IMPLANT PLANNING SOFTWARE AND MIRROR IMAGE/SUPERIMPOSITION OF THE CONTRALATERAL ORBITAL STRUCTURE.

RESULTS-OUTCOME/FOLLOW-UP: USING A COMBINATION OF DIGITAL TECHNOLOGIES, THE IMPLANT POSITIONS/ANGULATIONS WERE PLANNED WITH THE FUTURE ORBITAL PROSTHESIS AS A GUIDE TO SELECT THE MOST APPROPRIATE IMPLANT SITES. A LASER-SINTERED METALLIC FULLY GUIDED IMPLANT STENT WAS MADE AND UTILIZED FOR IMPLANT PLACEMENT, SO THAT THE IMPLANTS ARE

CONDUCIVE TO ENHANCING THE PROSTHETIC OUTCOME BESIDES PROVIDING SUPPORT AND RETENTION FOR THE PROSTHESIS.

CONCLUSION: USING COMBINATION OF DIGITAL TECHNOLOGIES, IT IS POSSIBLE TO USE A PROSTHETICALLY DRIVEN FULLY GUIDED IMPLANT PLANNING FOR ORBITAL IMPLANTS BY USING LASER SINTERED STABLE METALLIC SURGICAL GUIDE TO ENSURE PREDICTABLE PLACEMENT OF IMPLANTS AND FOR IMPROVING THE OUTCOME OF ORBITAL PROSTHETICS.

NOVEL TECHNIQUE FOR STATIC TISSUE RECORDING AFTER TOTAL MAXILLECTOMY AND FLAP FAILURES: MANAGING THICK ANTEROLATERAL THIGH FLAPS

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THE LOUISIANA STATE UNIVERSITY HEALTH NEW ORLEANS SCHOOL OF DENTISTRY (LSUSD)-
NEW ORLEANS, LA UNITED STATES

AUTHOR LIST: AHMED ALADAWI, BDS.MSC, ROGER VITTER, DDS

OBJECTIVE: TO INTRODUCE AN INNOVATIVE AND EFFICIENT DIGITAL TECHNIQUE FOR PRECISELY CAPTURING STATIC IMPRESSIONS IN PATIENTS WITH EXTENSIVE MAXILLOFACIAL DEFECTS, ESPECIALLY THOSE WHO HAVE EXPERIENCED FAILED FIBULA AND RIB FLAP RECONSTRUCTIONS FOLLOWING A TOTAL BILATERAL MAXILLECTOMY, INCLUDING

SOFT PALATE RESECTION, AND WERE RECONSTRUCTED WITH A THICK, FLABBY ANTEROLATERAL THIGH (ALT) FLAP.

CASE HISTORY: A 73-YEAR-OLD MALE PATIENT UNDERWENT A TOTAL BILATERAL MAXILLECTOMY WITH SOFT PALATE RESECTION AFTER BEING DIAGNOSED WITH SQUAMOUS CELL CARCINOMA. ATTEMPTS AT RECONSTRUCTION USING FIBULA AND RIB FLAPS WERE UNSUCCESSFUL, LEADING TO THE USE OF A THICK, FLABBY (ALT) FLAP FOR RECONSTRUCTION. DUE TO THE SOFT, UNSTABLE NATURE OF THIS FLAP, TRADITIONAL IMPRESSION TECHNIQUES PROVED INEFFECTIVE. A NEW DIGITAL APPROACH WAS IMPLEMENTED TO ACCURATELY CAPTURE THE STATIC STATE OF THE TISSUES, ENABLING PRECISE PROSTHETIC DESIGN AND FIT. THIS PROCESS UTILIZED INTRAORAL SCANNING BY PRIMESCAN WITH THE ASSISTANCE OF DIFFERENT FIDUCIAL MARKERS, FOLLOWED BY DIGITAL REFINEMENT USING EXOCAD SOFTWARE AND 3D PRINTING WITH THE DESKTOP HEALTH EINSTEIN PRINTER.

OUTCOME/FOLLOW-UP: THE DIGITAL IMPRESSION TECHNIQUE ACCURATELY CAPTURED THE PATIENT'S SOFT TISSUES, ENABLING THE CREATION OF A WELL-ADAPTED BASE THAT FACILITATED THE DENTURE FABRICATION PROCESS. THIS RESULTED IN IMPROVED FUNCTIONALITY AND COMFORT FOR THE PATIENT. THE PATIENT EXPERIENCED BETTER FUNCTION AND ESTHETICS AND EXPRESSED SATISFACTION WITH THE FINAL OUTCOME. DURING FOLLOW-UP VISITS, THE PROSTHESIS CONTINUED TO FIT WELL, MAINTAINING ITS STABILITY OVER TIME.

CONCLUSION: THIS CASE DEMONSTRATES THE EFFECTIVENESS OF A NOVEL DIGITAL IMPRESSION TECHNIQUE IN MANAGING COMPLEX SOFT TISSUE ANATOMY FOLLOWING A FULL MAXILLECTOMY AND MULTIPLE FLAP FAILURES. THIS APPROACH OFFERS A RELIABLE SOLUTION FOR STATIC TISSUE RECORDING, IMPROVING PROSTHETIC OUTCOMES FOR PATIENTS WITH EXTENSIVE MAXILLOFACIAL DEFECTS.

FABRICATION OF MONOLITHIC 3D PRINTED PMMA PROSTHESIS FOR PATIENT WITH PARTIAL MAXILLECTOMY UTILIZING A FULLY DIGITAL WORKFLOW: A CASE REPORT

AL-SALIHI, ZEINA
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AUTHOR LIST: ZEINA AL-SALIHI BDS, MSC; ADAM MILLER, CDT; YEDEH YING, DMD, MD; MICHAEL KASE, DDS.

OBJECTIVE: TO ELIMINATE SEVERAL FABRICATION STEPS AND REDUCING THE POSSIBILITY OF ERROR WHILE SAVING TIME AND LIMITING PATIENT DISCOMFORT USING PHOTOGRAMMETRY AND 3D PRINTING.

MATERIALS & METHODS: 45 YEARS OLD MALE PRESENTED TO THE MAXILLOFACIAL PROSTHODONTICS CLINIC WITH PREVIOUS HISTORY OF AMELOBLASTOMA TO THE RIGHT MAXILLA WHO UNDERWENT S/P RIGHT PARTIAL MAXILLECTOMY AND LEFT FIBULA FREE FLAP WITH CONCURRENT PLACEMENT OF 5 DENTAL IMPLANTS. THE

PATIENT HEALED AND THEN UNDERWENT A DEBULKING PROCEDURE AS WELL AS EXPOSURE OF THE IMPLANTS.

OBTAINING AN ACCURATE REPRESENTATION OF THE IMPLANTS POSITIONS IS A CRUCIAL FOR THE LONG-TERM SUCCESS OF ANY IMPLANT SUPPORTED PROSTHESIS.AFTER MULTIPLE FAILED ATTEMPTS TO MAKE THE CONVENTIONAL OPEN TRAY ABUTMENTS LEVEL IMPRESSION. AN ALTERNATIVE PROSTHETIC WORKFLOW WAS DONE USING CARESTREAM INTRAORAL SCANNER AND THE CORRESPONDING SCAN BODIES FOR THE MU ABUTMENTS TO OBTAIN AN INTRAORAL SCAN OF THE SOFT TISSUE. FOLLOWED BY GRAMMEE BLUE SKY BIO PHOTOGRAMMETRY CAMERA TO OBTAIN THE ACCURATE REPRESENTATION OF THE IMPLANT'S POSITIONS FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS. ONCE THE PHOTOGRAMMETRY SCAN WAS COMPLETED, AN STL FILE WAS CREATED, AND UPLOADED TO THE CAD SOFTWARE EXOCAD. THE TWO SCANS WERE MERGED, AND THE PATIENT?S PROSTHESIS WAS DESIGNED, 3D-PRINTED AND DELIVERED DIRECTLY TO THE MU ABUTMENTS WITHOUT THE USE OF TITANIUM CYLINDERS UTILIZING VORTEX SCREWS.

RESULTS: THE USE OF PHOTOGRAMMETRY AND 3D PRINTING HAS GIVEN THE CLINICIANS THE OPPORTUNITY TO UTILIZE AN ALTERNATIVE FULLY DIGITAL WORKFLOW OPTION. PHOTOGRAMMETRY TECHNOLOGY CALCULATES THE POSITION AND ORIENTATION OF MULTIPLE IMPLANT INTERFACES QUICKLY, EFFICIENTLY AND ACCURATELY. WITH THE CONVENTIONAL IMPRESSION TECHNIQUE, MANY INHERENT PATIENT?S FACTORS CAN LEAD TO INACCURACY.

With photogrammetry, these factors do not affect the accuracy as the record is being taken extra-orally.

Conclusion: Following this process, the patient was able to have an esthetic, passive fitting, prosthesis to be used during the healing time.

FEASIBILITY OF USING PHOTOGRAMMETRY FOR EXTRAORAL/FACIAL IMPLANTS: A LITERATURE REVIEW AND CASE SERIES

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AUTHOR LIST: ZEINA AL-SALIHI BDS, MSC; HIMANSHI AGGARWAL, BDS, MDS; IRADJ SOOUDI DMD DDS; MICHAEL KASE, DDS, FAMP.

OBJECTIVE: TO CHECK THE FEASIBILITY AND ACCURACY OF PHOTOGRAMMETRY FOR CAPTURING IMPLANTS POSITIONS FOR EXTRAORAL/FACIAL IMPLANTS.

MATERIALS & METHODS: A RECENT SYSTEMATIC REVIEW COMPARED CONVENTIONAL IMPRESSIONS, INTRAORAL SCANNING, AND PHOTOGRAMMETRY, CONCLUDING THAT PHOTOGRAMMETRY IS ACCURATE FOR FULL-ARCH IMPLANT IMPRESSIONS. HOWEVER, THERE IS A RELATIVELY SCARCE LITERATURE REGARDING USING PHOTOGRAMMETRY FOR EXTRAORAL IMPLANT IMPRESSIONS. TWO PATIENTS, WHO PRESENTING TO THE MAXILLOFACIAL PROSTHODONTICS CLINIC AT UAB FOR IMPLANT SUPPORTED ORBITAL PROSTHESIS AND IMPLANT SUPPORTED AURICULAR PROSTHESIS RESPECTIVELY WERE RECRUITED FOR THIS STUDY. THE FIRST PATIENT HAD HISTORY OF CONJUNCTIVAL SQUAMOUS CELL CARCINOMA WITH EXISTING FOUR IMPLANTS IN 1'0, 2'0, 4'0 AND 5'0 CLOCK POSITIONS PLACED IN THE SUPRA ORBITAL MARGIN AND THE ZYGOMATIC

BONE. THE SECOND PATIENT HAD A HISTORY OF LEFT MICROTIA WITH EXISTING THREE IMPLANTS PLACED IN 1'0. 3'0 AND 5'0 CLOCK POSITION IN THE TEMPORAL BONE. THEY WERE TREATMENT PLANNED FOR BAR-RETAINED PROSTHESIS. IOS WAS DONE USING TRIOS5 3SHAPE SCANNER AND THE CORRESPONDING SCAN BODIES FOR THE MU ABUTMENTS. GRAMMEE DOT POSTS SCAN BODIES WERE PLACED ON THE MULTI-UNIT ABUTMENTS OF EACH IMPLANT AND A GRAMMEE BLUE SKY BIO PHOTOGRAMMETRY SYSTEM WAS USED FOLLOWING THE MANUFACTURER'S
RECOMMENDATIONS. THE MASTER MODELS WERE 3D PRINTED AND MU TI CYLINDERS WERE PLACED ON MUA, SPLINTED TOGETHER WITH GC PATTERN RESIN TO FABRICATE THE VERIFICATION JIGS. THE JIGS WERE SECTIONED AFTER 24 HOURS AND RECONNECTED CLINICALLY. THE SCREW RESISTANT TEST, THE ALTERNATE FINGER PRESSURE AND THE VISUAL OBSERVATIONS WERE APPLIED TO TEST THE VERIFICATION JIGS ACCURACY OF FIT AND EVALUATE THE MISFIT.

RESULTS: THE LITERATURE REVIEW SHOWED THAT IN COMPARISON TO CONVENTIONAL IMPRESSION METHODS, PHOTOGRAMMETRY IS MORE EFFICIENT, FASTER, LESS CUMBERSOME AND PROVIDES GREATER PATIENT SATISFACTION THAN CONVENTIONAL IMPRESSION METHODS. FOR BOTH THE PATIENTS SCANNED USING PHOTOGRAMMETRY, THE VERIFICATION JIGS FITTED PASSIVELY, THUS INDICATING THAT PHOTOGRAMMETRY CAN BE USED FOR FINAL IMPRESSIONS FOR EXTRAORAL IMPLANTS.

CONCLUSION: ACHIEVING A PASSIVE FIT OF AN IMPLANT-SUPPORTED FRAMEWORK IS CHALLENGING WHEN TREATING MAXILLOFACIAL PROSTHETICS PATIENTS. THROUGH THE IMPLEMENTATION OF CUTTING-EDGE PHOTOGRAMMETRIC METHODS, THE EFFICACY AND PRECISION OF CREATING DIGITAL CASTS FOR MAXILLOFACIAL PROSTHESES COULD BE SIGNIFICANTLY ENHANCED, LEADING TO IMPROVED PATIENT OUTCOMES AND INCREASED CONVENIENCE.

PROSTHETIC REHABILITATION OF THE ONCOLOGIC RHINECTOMY PATIENT UTILIZING MAXILLARY OBTURATOR AND MAGNET-RETAINED NASAL PROSTHESES

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A 50-YEAR-OLD MALE PATIENT PRESENTED TO THE DENTAL SERVICE AT MEMORIAL SLOAN KETTERING CANCER CENTER FOR MANAGEMENT OF A POST-SURGICAL DEFECT OF THE NOSE AND ANTERIOR MAXILLA.

THE PATIENT HAS A HISTORY OF SQUAMOUS CELL CARCINOMA OF THE NOSE AND ANTERIOR MAXILLA. HE PRESENTS STATUS POST TOTAL RHINECTOMY, PARTIAL MAXILLECTOMY LIMITED TO THE PREMAXILLA, ANTERIOR LATERAL THIGH FLAP, AND ADJUVANT RADIATION THERAPY FOLLOWING SURGERY PERFORMED AT AN OUTSIDE INSTITUTION. UNFORTUNATELY, THE ALT FLAP BECAME NECROTIC SHORTLY AFTER SURGERY WHICH REQUIRED ANOTHER OPERATION FOR DEBRIDEMENT.

A LARGE MAXILLARY STOCK TRAY WAS MODIFIED SUCH THAT THE ANTERIOR FLANGES WERE REDUCED, VPS PUTTY WAS USED TO BORDER MOLD THE POSTERIOR EXTENT AND ANTERIOR MAXILLARY DEFECT. ONCE THE PUTTY WAS SET, IT WAS CUT BACK TO ALLOW FOR THICKNESS OF IMPRESSION

material. Then an irreversible hydrocolloid (Dentsply Sirona Jeltrate Plus) impression was made for fabrication of a wrought wire and heat-polymerized acrylic resin (Dentsply Sirona Lucitone-199) maxillary obturator prosthesis. At a subsequent appointment, the maxillary obturator prosthesis was delivered.

Because the patient presented post-surgery, no facial moulage was able to be made prior. Utilizing the nasal contours of another patient, a provisional nasal prosthesis was delivered to replicate the patient's nasal contours. The prosthesis was secured with medical grade adhesive tape and removed daily by the patient. Once the patient had significant time to adapt to his maxillary obturator prosthesis, a magnet was incorporated into the bulb of the prosthesis with auto-polymerizing acrylic resin (Keystone-Bosworth TruRepair) under pressure. The maxillary obturator prosthesis was inserted intraorally, and an impression coping was attached to the magnet. A facial moulage was made with irreversible hydrocolloid (Dentsply Sirona Jeltrate Plus) and fast setting plaster picking up the location of the magnet.

Using the patient's cast, a wax sculpture of the nasal prosthesis was made and subsequently tried on the patient. A base shade for the nasal prosthesis was selected followed by processing of the prosthesis into silicone (Factor 2 RTV-4030) which

WAS EXTRINSICALLY TINTED TO MATCH THE PATIENT'S ADJACENT SKIN COLORS. THE COMPLETED NASAL PROSTHESIS WAS THEN DELIVERED, AND HOME CARE INSTRUCTIONS WERE REVIEWED.

THE PATIENT WAS SATISFIED WITH THE ESTHETICS, FIT, AND FUNCTION OF THE NASAL PROSTHESIS. FOLLOWING DELIVERY OF THE NASAL PROSTHESIS, A DEFINITIVE MAXILLARY OBTURATOR PROSTHESIS CAN BE FABRICATED. AN IMPRESSION COPING WILL BE PLACED ON THE NASAL PROSTHESIS AND PICKED UP IN THE FINAL IMPRESSION FOR THE DEFINITIVE MAXILLARY OBTURATOR PROSTHESIS.

Jaw-in-a-Day: Surgical and Prosthetic Rehabilitation of Ameloblastoma

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This poster reports a case of a 27-year-old male patient diagnosed with a biopsy-proven mandibular ameloblastoma and the subsequent reconstruction. The diagnosis and extent of the tumor prompted the need for subtotal mandibular resection and reconstruction with a fibula-free flap. The "Jaw-in-a-Day" protocol utilizes virtual surgical planning (VSP) to pre-plan all surgical and prosthetic components of the reconstruction. With VSP, the mandibular resection, fibula osteotomies, dental implant placement, custom reconstruction plate, and conversion prosthesis, are all determined before the patient is in the OR. The full-arch conversion prosthesis was picked up at the pre-operative occlusal vertical dimension and maximumintercuspation position with the use of a "stealth articulator"

DIGITAL TECHNOLOGIES ALLOWED FOR ACCURATE TREATMENT AND COMPLETE RESTORATION OF MANDIBULAR FUNCTION AND QUALITY OF LIFE.

"RAISING THE BAR" WITH AN OBTURATOR OVERDENTURE FOR A PROFESSIONAL OPERA SINGER

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PATIENTS WITH CLEFT PALATES EXPERIENCE A HIGH DEGREE OF MORBIDITY DUE TO EXTENSIVE SCARRING FROM MULTIPLE SURGERIES AND LACK OF SUPPORTING STRUCTURES IN THE CLEFT SITE. THIS PATIENT POPULATION ALSO EXPERIENCES CHALLENGES WITH PHONATION, DEGLUTITION AND MASTICATION. LIFELONG PROSTHODONTIC CARE IS IMPERATIVE TO ENHANCE ESTHETICS, REPLACE MISSING TEETH AND MINIMIZE THE NUMBER AND EXTENT OF INVASIVE PROCEDURES.

A 60-YEAR-OLD MALE PRESENTED TO MONTEFIORE MEDICAL CENTER WITH A RESIDUAL CLEFT PALATE. HIS TOOTH BORNE, OVERLAY OBTURATOR LACKED RETENTION DUE TO THE MOBILITY OF HIS ANTERIOR TEETH (#'S 6 AND 11). AS A PROFESSIONAL OPERA SINGER, HE RELIED HEAVILY ON PROSTHETIC OBTURATION FOR OPTIMAL PERFORMANCE. CLINICAL EVALUATION REVEALED #'S 6 AND 11 WERE NON-

restorable. The treatment pursued was a 2-implant bar, obturator overdenture.

Implant-Supported Surgical Guide for Implant Placement in a Partial Maxillectomy Patient

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Statement of the Problem: A 69-year-old Caucasian male presents with an overdenture obturator restoring an Aramany class II defect. Clinical examination revealed fracture of one of the three existing implants. Cone beam computed tomography (CBCT) demonstrated minimal alveolar ridge for additional implant placement. This case requires fully guided implant placement due to the limited availability of bone in the maxilla, yet the acquired

MAXILLARY DEFECT AND EDENTULOUS ARCH PROVIDES INSUFFICIENT GUIDE SUPPORT.

PURPOSE: TO PROVIDE A CASE STUDY EXHIBITING TECHNIQUES TO STABILIZE SURGICAL GUIDES AND INCREASE IMPLANT PLACEMENT ACCURACY FOR MAXILLOFACIAL PATIENTS, ESPECIALLY IN EDENTULOUS PARTIAL MAXILLECTOMY CASES.

METHODS: THE EXISTING OBTURATOR WAS CONVERTED TO A LOCATOR OVERDENTURE AND USED TO FABRICATE A SCAN APPLIANCE. THE SCAN APPLIANCE WAS RELINED AND USED TO IMPRESS THE LOCATION OF THE LOCATOR ABUTMENTS. A TISSUE-SURFACE MODEL WAS POURED IN TYPE V STONE AND FABRICATED FROM THE RELINED SCAN APPLIANCE. STANDARD TESSELLATION LANGUAGE FILES OF THE SCAN APPLIANCE AND TISSUE-SURFACE MODEL WERE THEN ALIGNED TO THE CBCT FOR IMPLANT PLANNING. AN IMPLANT-SUPPORTED SURGICAL GUIDE WAS FABRICATED BY ADDITIVE MANUFACTURING. THE LOCATOR HOUSINGS WERE PICKED UP IN THE SURGICAL GUIDE AND ADDITIONAL STABILITY WAS ATTAINED BY SOFT RELINE OF THE BULB AND FROM GUIDE PINS. LASTLY, THE GUIDE WAS INSERTED ON TO THE LOCATOR ABUTMENTS AND IMPLANTS WERE PLACED.

DISCUSSION: UTILIZATION OF EXISTING IMPLANTS PROVIDES A REPEATABLE REFERENCE POINT THROUGHOUT IMPLANT PLANNING AND PLACEMENT. FURTHER, THE ABILITY TO ORIENT THE GUIDE TO THE EXISTING IMPLANTS CAN MINIMIZE DEVIATION BETWEEN THE ACTUAL IMPLANT POSITION AND THE PLANNED IMPLANT POSITION. LASTLY, UTILIZING THE

LOCATOR OVERDENTURE SYSTEM ON EXISTING IMPLANTS AND SOFT RELINE OF THE MAXILLARY DEFECT CAN ENHANCE GUIDE SUPPORT IN EDENTULOUS PARTIAL MAXILLECTOMY PATIENTS.

CLINICAL IMPLICATION: SUCCESSFUL PLACEMENT OF IMPLANTS WILL AID OBTURATOR RETENTION AND FUNCTION, AND THEREBY MAY IMPROVE THE QUALITY OF LIFE FOR PARTIAL MAXILLECTOMY PATIENTS.

ZYGOMATIC IMPLANT PERFORATED (ZIP) FLAP AND MAGNETIC INTERIM IMPLANT CONNECTING BAR SUPPORTING OVERLAY MAXILLARY RESECTION PROSTHESES: A CASE SERIES

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REHABILITATION OF ACQUIRED MAXILLARY DEFECTS RESULTING FROM TUMOR ABLATION INVOLVES VARIOUS TREATMENT OPTIONS, INCLUDING CONVENTIONAL PROSTHETIC OBTURATION, ZYGOMATIC IMPLANT-SUPPORTED OBTURATORS, AND FREE FLAP RECONSTRUCTION WITH OR WITHOUT DENTAL IMPLANTS. WHILE SOME OF THESE STRATEGIES HAVE BEEN ORGANIZED INTO A TREATMENT ALGORITHM BY OKAY ET AL., ADDITIONAL OPTIONS HAVE EMERGED SINCE ITS PUBLICATION.

FABRICATING AN EFFECTIVE OBTURATOR FOR LARGE, OKAY III DEFECTS PRESENTS SIGNIFICANT CHALLENGES RELATED TO RETENTION, STABILITY, SUPPORT, COMFORT, AND EFFICACY, AS WELL AS ACHIEVING AN ADEQUATE ORONASAL AND OROANTRAL SEAL. THESE DIFFICULTIES ARE FURTHER EXACERBATED BY COMPLETE EDENTULISM AND RADIATION-INDUCED CHANGES SUCH AS TRISMUS AND SOFT TISSUE FIBROSIS. POOR OBTURATOR FUNCTION CAN SEVERELY IMPACT THE QUALITY OF LIFE, PARTICULARLY IN PATIENTS EXPERIENCING RADIATION SEQUELAE.

The use of zygomatic implants in managing maxillary and midface malignancies is well-documented, demonstrating substantial support for prosthodontic reconstruction. The zygomatic implant perforated (ZIP) flap, first described in 2017, offers immediate reconstruction and rapid prosthodontic treatment for low-level maxillectomy defects. This technique integrates a soft-tissue free flap for oronasal closure with early loading of zygomatic implants, whose abutments perforate the flap.

This case series presents three patients who underwent ZIP flap reconstruction at Ronald Reagan Hospital between March and May 2024. The first patient was completely edentulous and underwent a right Okay Ib maxillectomy; the second had a Okay IIIf maxillectomy; and the third received a revision maxillectomy that became Okay III. All three patients received a ZIP flap employing four zygomatic implants and a radial forearm free flap.

Current literature of the ZIP flap technique reports the early delivery of interim fixed, screw-retained prostheses within several weeks post-surgery. However, this case series describes an alternative approach utilizing an interim implant-supported bar and mesostructure connected by neodymium magnets to retain a removable prosthesis. This method allows for rapid delivery of

A PROVISIONAL PROSTHESIS WITHIN TWO WEEKS OF SURGERY. ADDITIONALLY, ZIP FLAPS RESTORED REMOVABLE PROSTHESES OFFER SEVERAL ADVANTAGES OVER FIXED RESTORATIONS IN MAXILLECTOMY PATIENTS, INCLUDING IMPROVED HYGIENE, BETTER CONTROL OF PERIPHERY AND LIP SUPPORT, AND THE ABILITY TO ADDRESS CHALLENGES RELATED TO TRISMUS.

COMPLICATIONS IN THIS COHORT INCLUDED ORONASAL FISTULAS, FLAP DEHISCENCE, AND THE FAILURE OF ONE ZYGOMATIC IMPLANT, ALL OF WHICH WERE MANAGED APPROPRIATELY.

Maxillary Reconstruction with a Modified "Jaw in a Day" Surgery Technique

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The “Floating Pickup” technique is a step in the "Jaw in a Day" protocol during free fibula flap reconstructive surgery. It allows the practitioner to index surgically placed implants and the plated fibula to the provisional prosthesis on the stereolithographic model. The provisional prosthesis can then be delivered during the surgery or at the next restorative appointment. Traditionally, this technique is dependent on picking up the implants utilizing the patient's remaining teeth as reference. However, there are many situations where the patient does not have remaining teeth to utilize as stable reference positions. This poster demonstrates a modification to this traditional "Floating Pickup" technique for clinical situations in which teeth are not available to reference. This modification uses anatomy present on the intraoperative stereolithic model, but not exposed in the primary surgical site. The infra-orbital rim, nasal spine, or sigmoid notch, are employed to predictably perform the ?pick-up? with support struts connecting the provisional to the stereolithographic model. This allows for the "Jaw

IN A DAY" PROSTHESIS TO BE DELIVERED TO THE EDENTULOUS PATIENT.

REHABILITATION OF RECONSTRUCTED MANDIBLE S/P FIBULA FREE FLAP

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THE CURRENT CASE REPORT IS TO DETERMINE A WORKFLOW ON RESTORING RECENTLY PLACED FIBULA GRAFT WITH IMPLANTS, AS WELL AS EXPOSING PROSTHETIC CHALLENGES, SUCH AS FACIAL COLLAPSE, IN THE PROCESS.
CLINICAL PROCEDURES (METHODS)

AFTER ROUTINE DENTAL APPOINTMENT, THE PATIENT RECEIVED A DIAGNOSIS OF AMELOBLASTOMA OF THE RIGHT POSTERIOR MANDIBLE OVERLYING RETROMOLAR PAD WITH SUPERIOR EXTENSION ALONG MANDIBULAR RAMUS. ORAL MAXILLOFACIAL SURGEON AND PLASTIC SURGEON PERFORMED HEMI-MANDIBULECTOMY/FIBULA FREE FLAP GRAFT. PATIENT WAS REFERRED TO NSU-POST-GRADUATE PROSTHODONTICS FOR EXAMINATION AND TREATMENT PLANNING FOR IMPLANT SUPPORTED RESTORATION.

AFTER COMPREHENSIVE EXAMINATION, THE PATIENT EXHIBITED RIGHT FACIAL COLLAPSE, ADDITIONALLY, THE

PATIENT WAS RETURNED TO OMFS FOR DEBULKING PROCEDURE IN THE AREA OF THE GRAFT TO FACILITATE IMPLANT PLACEMENT AND RESTORATION. IMPLANTS WERE PLACED, PERMITTED TO INTEGRATE UNLOADED; AND IMMEDIATE REMOVABLE PROSTHESES WERE COMMENCED. EXTRACTION OF REMAINING NATURAL TEETH AND BONE GRAFTING COMPLETED FOR IMPLANT PLACEMENT IN REMAINING NATIVE MANDIBLE. DELIVERY OF IMMEDIATE DENTURES WAS COMPLETED. IMMEDIATE DENTURES REVEALED A DEVIATION OF THE MANDIBLE TO THE LEFT SIDE. ACRYLIC WAS ADDED TO MANDIBULAR DENTURE TO CREATE A RAMP FOR STABLE OCCLUSION AND ESTHETICS. AFTER FURTHER HEALING, NEW MAXILLARY AND MANDIBULAR REMOVABLE PROSTHESES WERE DELIVERED REPLICATING THE CONTOURS OF THE IMMEDIATE PROSTHESES. AFTER HEALING, IMPLANT POSITIONS WERE CAPTURED THROUGH DIGITAL SCANNING WITH PRIMESCAN BY DENTSPLY SIRONA. FIVE IMPLANTS IN THE MANDIBLE WERE PLACED AND LOADED 20 WEEKS S/P PLACEMENT.

PATIENT WAS OFFERED SEVERAL DEFINITIVE TREATMENT PLAN OPTIONS AND DECIDED TO FABRICATE MAXILLARY COMPLETE REMOVABLE DENTURE AND MANDIBULAR ALL-ON-X SUPPORTED BY BOTH NATIVE MANDIBLE AND FIBULA FREE FLAP GRAFT.

MANDIBULAR IMPLANTS WERE PERMITTED TO HEAL FOR 5 MONTHS TO ENSURE HIGHEST LEVELS OF INTEGRATION PRIOR TO CONNECTION WITH PROSTHESIS. EXISTING, COMFORTABLY WORN MANDIBULAR REMOVABLE COMPLETE PROSTHESIS WAS CONVERTED TO AN IMPLANT RETAINED

(FP3 TYPE) PROSTHESIS. PATIENT HAS DECIDED TO HAVE IMPLANTS PLACED IN MAXILLA FOR MAXILLARY FP3 RESTORATION. MANDIBULAR RESTORATION HAS PROGRESSED TO PROTOTYPE ADDRESSING FACIAL CONTOURS. HYGIENIC CONSIDERATIONS PRECLUDED MOVING FORWARD WITH THE ADDITION OF MATERIAL TO CORRECT FACIAL CONTOURS AND PATIENT HAS DECIDED TO WORK WITH A MEDICAL AESTHETICIAN FOR SUBCUTANEOUS FILLERS TO AID IN FACIAL CONTOUR.

CONCLUSION: PROPER SEQUENCING FOR A PREDICTABLE RESULT AND SUCCESSFUL PROSTHETIC OUTCOME IS PARAMOUNT IN A FIBULA GRAFTED CASE. THE POTENTIAL FOR THE NEED FOR DEBULKING, FACIAL CONTOUR ANOMALY, IMPLANT INTEGRATION AND PATIENT COMFORT ARE PARAMOUNT IN TREATMENT PLANNING AND PROGRESS THROUGH CARE. ADJUSTMENTS TO CARE AND SEQUENCING COULD NOT HAVE BEEN RECOGNIZED HAD A CONVERTED PROSTHESIS BEEN PLACED AT TIME OF IMPLANT SURGERY.

IMMEDIATE PROSTHETIC PROVISIONALIZATION OF MAXILLARY DEFECTS UTILIZING VIRTUALLY PLANNED SUBPERIOSTEAL IMPLANTS: A THREE CASE SERIES

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MAXILLOFACIAL REHABILITATION FOR MAXILLARY DEFECTS PRESENTS SUBSTANTIAL CHALLENGES, PARTICULARLY WHEN TRADITIONAL DENTAL IMPLANT PROTOCOLS ARE UNSUITABLE. RECENT ADVANCEMENTS IN TECHNOLOGY HAVE NOTABLY ENHANCED TREATMENT OUTCOMES FOR THESE COMPLEX CASES. THIS CLINICAL CASE SERIES HIGHLIGHTS ADVANCEMENTS IN MAXILLARY REHABILITATION BY DEMONSTRATING THE MANAGEMENT OF UNIQUE CHALLENGES THROUGH IMMEDIATE PROSTHETIC PROVISIONALIZATION WITH ADVANCED ADDITIVE MANUFACTURING OF SUBPERIOSTEAL IMPLANTS IN THREE PATIENTS WITH DISTINCT MAXILLARY DEFECTS. THE FIRST PATIENT SUFFERED NECROSIS OF THE PREMAXILLA (#7-10) FOLLOWING A THREE-PIECE LE FORT OSTEOTOMY. THE SECOND PATIENT UNDERWENT A PARTIAL MAXILLECTOMY (#4-11) DUE TO RECURRENT AMELOBLASTOMA, AND THE THIRD HAD A PARTIAL MAXILLECTOMY (#9-15) AS A RESULT OF OSTEOSARCOMA.

Historically, subperiosteal implant procedures involved a two-step surgical approach: first, a flap procedure to expose the bone, followed by impression making and casting the implant in cobalt-chromium (Co-Cr). The final step involved implant placement, which relied solely on soft tissue encapsulation. This method often led to problems such as poor fit, instability, and high failure rates?often exceeding 50% at 15years- largely due to soft tissue breakdown, lack of biocompatibility with Co-Cr, and complications related to residual bone resorption.

Recent technological advancements have transformed this process by replacing the traditional two-step procedure with a streamlined single-step approach. Modern subperiosteal implants utilize computed tomography aligned with digital dental scans and advanced digital planning technologies, allowing for precise occlusion based design tailored to each patient's unique defects and bone availability. These implants are manufactured using Selective Laser Melting (SLM) from a titanium-vanadium-aluminum alloy (titanium grade V). They feature a custom-designed framework that includes precisely aligned transmucosal/transcutaneous pillars and multi-unit abutment connections, all integrated into a single patient-specific implant. Unlike endosseous dental implants, this technique achieves multiple

REMOTE FIXATION SITES, ENSURING PRIMARY STABILITY WITHOUT RELYING ON OSSEOINTEGRATION.

A KEY BENEFIT OF THIS MODERN APPROACH IS THE INTEGRATION OF INTERDISCIPLINARY PLANNING WITH THE HEAD AND NECK SURGERY TEAM AND MAXILLOFACIAL PROSTHODONTIST. COLLABORATIVE EFFORTS ENHANCE BOTH SURGICAL AND PROSTHETIC OUTCOMES. THIS CASE SERIES EXPLORES THE ADVANTAGES AND CHALLENGES OF THIS MODERN TECHNIQUE, EMPHASIZING THE IMPACT OF DIGITAL PLANNING, IMPLANT DESIGN, AND PLACEMENT. CONSIDERATIONS FOR PROSTHETIC CONTOURS, RESTORATIVE SPACE, AND SOFT TISSUE MANAGEMENT ARE DISCUSSED IN RELATION TO EACH CASE. IMMEDIATE PLACEMENT OF PROVISIONAL FIXED DENTAL PROSTHESES IS FACILITATED BY THE PRECISION AND EFFICIENCY OF CAD/CAM SYSTEMS, POTENTIALLY REDUCING OVERALL TREATMENT TIME AND SIGNIFICANTLY ENHANCING PATIENT QUALITY OF LIFE.

MAXILLARY RECONSTRUCTION IN A PATIENT WITH CALCIFYING EPITHELIAL ODONTOGENIC CYST - FIBULA JAW IN A DAY

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THE CONCEPT OF UTILIZING A FIBULA FREE FLAP FOR JAW RECONSTRUCTION EMERGED IN THE LATE 1970S, MARKING A SIGNIFICANT MILESTONE IN RECONSTRUCTIVE SURGERY. HOWEVER, THE "FIBULA JAW IN A DAY" APPROACH, A MORE RECENT INNOVATION, HAS TRULY REDEFINED THE FIELD. BY INTEGRATING FIBULA FREE FLAP, IMMEDIATE DENTAL IMPLANT PLACEMENT, AND IMMEDIATE RESTORATIONS INTO A SINGLE PROCEDURE, THIS TECHNIQUE OFFERS A SUBSTANTIAL LEAP FORWARD IN PATIENT OUTCOMES AND TREATMENT EFFICIENCY.

RECENT ADVANCEMENTS IN DIGITAL TECHNOLOGY HAVE SIGNIFICANTLY ENHANCED THE PRECISION AND PREDICTABILITY OF JAW RECONSTRUCTION. VIRTUAL SURGICAL PLANNING (VSP) EMPOWERS SURGEONS AND PROSTHODONTISTS WITH THE ABILITY TO METICULOUSLY PRE-PLAN SURGICAL AND PROSTHETIC ASPECTS FOR MAXILLECTOMY, EVEN WHEN FACED WITH COMPLEX

ANATOMICAL CHALLENGES. VSP OPTIMIZES CONTOUR PRESERVATION, VASCULARIZATION, AND OSSEOINTEGRATION, THEREBY FACILITATING PRE-IMPLANTATION AND STREAMLINING THE REHABILITATION PROCESS.

THIS CASE REPORT PRESENTS A SUCCESSFUL APPLICATION OF THE FIBULA JAW IN A DAY TECHNIQUE. A 25-YEAR-OLD MALE UNDERWENT RIGHT PARTIAL MAXILLECTOMY AND RECEIVED A PATIENT-SPECIFIC FIBULA FREE FLAP. GUIDED BY VSP, THE MAXILLECTOMY, HARVESTING OF THE FIBULA, DENTAL IMPLANT PLACEMENT, RECONSTRUCTION PLATES, AND DELIVERY OF AN IMMEDIATE IMPLANT PROSTHESIS WERE ALL PERFORMED IN A SINGLE PROCEDURE. FOLLOWING OSSEOINTEGRATION AND HEALING OF THE FIBULA FLAP, A DEFINITIVE PROSTHESIS WAS FABRICATED, RESULTING IN EXCEPTIONAL AESTHETIC AND FUNCTIONAL OUTCOMES.

WHILE THE FIBULA JAW IN A DAY APPROACH OFFERS REMARKABLE BENEFITS, IT'S ESSENTIAL TO ACKNOWLEDGE POTENTIAL CHALLENGES. LIMITED MOUTH OPENING CAN HINDER THE FABRICATION OF INTRAORAL PROSTHESES, AND DONOR SITE COMPLICATIONS, SUCH AS CLAW TOE DEFORMITY, MAY ARISE. HOWEVER, THE ADVANTAGES OFTEN OUTWEIGH THESE POTENTIAL DRAWBACKS.

ADVANCES IN DIGITAL SURGICAL PLANNING HAVE TRANSFORMED THE LANDSCAPE OF JAW RECONSTRUCTION. THE FIBULA JAW IN A DAY TECHNIQUE, COUPLED WITH VSP, REPRESENTS A PARADIGM SHIFT IN TREATMENT, OFFERING PATIENTS IMPROVED OUTCOMES, REDUCED TREATMENT

TIME, AND ENHANCED QUALITY OF LIFE. AS TECHNOLOGY CONTINUES TO EVOLVE, WE CAN ANTICIPATE FURTHER ADVANCEMENTS IN THIS GROUNDBREAKING FIELD, LEADING TO EVEN MORE POSITIVE OUTCOMES FOR PATIENTS IN NEED OF JAW RECONSTRUCTION.

Implant Placement in Adult Patient With Cherubism

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Case Presentation:
Cherubism is a rare genetic disorder characterized by bilateral enlargement of the mandible and/or maxilla, linked to mutations in the SH3BP2 gene. These mutations cause dysregulation of osteoclast activity, leading to excessive bone resorption and remodeling, primarily affecting immune and bone remodeling pathways. Patients with cherubism often experience early deciduous tooth exfoliation, tooth impaction, displacement, agenesis of permanent teeth, and root resorption. These craniofacial manifestations tend to stabilize or regress with age.

This case report details a 25-year-old female patient with oligodontia associated with cherubism, presenting with ill-fitting dentures. The patient reported frequent denture fractures, gradual occlusal changes, root resorption, pain, and mobility in the remaining natural teeth. Initial

TREATMENT INVOLVED THE EXTRACTION OF TEETH WITH POOR PROGNOSIS, ALVEOPLASTY TO CREATE SUFFICIENT RESTORATIVE SPACE, AND PLACING MANDIBULAR IMPLANTS TO SUPPORT A FUTURE OVERDENTURE.

THE MANDIBULAR IMPLANTS WERE INTEGRATED INTO A REMOVABLE, IMPLANT-SUPPORTED DENTURE AT 6 MONTHS POST-PLACEMENT, AND FUNCTIONED SUCCESSFULLY OVER A FOUR-MONTH FOLLOW-UP PERIOD. SUBSEQUENTLY, THE TREATMENT PLAN WAS EXPANDED TO INCLUDE COMPLETE EDENTULATION AND DIGITAL PLANNING FOR MAXILLARY AND MANDIBULAR IMPLANT PLACEMENT USING A FULLY GUIDED SURGICAL APPROACH. THE PATIENT IS NOW AWAITING IMPLANT UNCOVERY IN DECEMBER AFTER SIX MONTHS OF HEALING.

SIGNIFICANCE FOR PRACTICE:

THERE IS LIMITED EVIDENCE ON THE USE OF DENTAL IMPLANTS IN PATIENTS WITH CHERUBISM. THIS CASE REPORT UNDERSCORES THAT DENTAL IMPLANTS CAN BE A VIABLE TREATMENT OPTION, IMPROVING THE LONG-TERM DENTAL REHABILITATION OUTCOMES FOR INDIVIDUALS WITH THIS RARE CONDITION.

Prosthetic Rehabilitation to a Patient Underwent Total Glossectomy and Hemi-mandibulectomy for Tongue Cancer in Youth

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Background: In March 1984, at age 31, a male patient underwent bilateral neck dissection, total glossectomy, and right hemi-mandibulectomy for tongue cancer. Reconstruction was performed using a pectoralis major myocutaneous flap, but the mandible was not rigidly reconstructed, leading to a loss of mandibular continuity. This caused impaired tongue mobility and a right backward deviation of the mandible. However, the patient, still young and with many remaining teeth on the left mandible, was able to maintain his daily life.

Clinical report: In August 2009, 25 years after surgery, the 56-year-old patient was referred to the Maxillofacial Prosthetics Clinic at Tokyo Medical and Dental University Hospital for prosthetic rehabilitation, because his remaining mandibular teeth were difficult to preserve. At his first visit, his epiglottis was visibly exposed in the oral cavity. Initially, a palatal augmentation prosthesis (PAP) with an occlusal ramp was planned for the maxilla, along with a prosthesis for the mandible, and were inserted in May 2010. However, due to concerns about accidental ingestion or aspiration caused by the visibility of the epiglottis, the patient was advised not to use the mandibular prosthesis. Next, a bone-anchored bridge with dental implants was planned for the left mandible. In January 2012, the patient was referred to the Implant Clinic. To avoid leaving the patient without occlusal contacts, the treatment was staged: Implants were placed in the left mandibular molar region (teeth 36 and 37) under general anesthesia in April 2012. Provisional crowns were inserted in October, and then teeth 35 and 34 were extracted. An additional implant was placed in tooth 34 in April 2013. Provisional bridge was inserted in teeth 34, 35, 36 and 37 in August, and the bone-anchored bridge was set in place in December. Later, fractures occurred in the opposing teeth 25 and 26. After root canal treatment, splinted crowns were placed for reinforcement in October 2017. The PAP was refabricated in August 2021.To

THE PRESENT, THE BONE-ANCHORED BRIDGE IN THE LEFT MANDIBLE SHOWS NO SIGNS OF BONE RESORPTION OR SWELLING AND IS FUNCTIONING WELL.

DISCUSSION AND CONCLUSION: FOR YOUNG PATIENTS WITH ORAL CANCER, THE POST-SURGERY PERIOD OFTEN LASTS MUCH LONGER THAN THE USUAL 10 YEARS OF FOLLOW-UP BY SURGEON. AS THE PATIENT AGES, THINNING OF THE SURGICAL FLAP, LOSS OF REMAINING TEETH, AND DECLINING ORAL FUNCTION CAN INCREASE THE RISK OF COMPLICATIONS SUCH AS ASPIRATION. THEREFORE, LONG-TERM CARE AND SUPPORT BY MAXILLOFACIAL PROSTHODONTISTS, SPEECH-LANGUAGE PATHOLOGISTS, AND DYSPHAGIA REHABILITATION SPECIALISTS ARE ESSENTIAL.

Utilization of Digital Technology for the Fabrication of an Implant-Retained Auricular Prosthesis with Printed Wax Prototype: A Case Report

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Reproducing the intricate anatomy of the human face using prosthetic materials is a challenging endeavor. The completed product requires a combination of medical knowledge, artistic skill, and proper material selection. A silicone auricular prosthesis serves as a non-surgical solution for patients with ear deformities, whether caused by disease, congenital or trauma. It replaces the missing facial anatomy, and restores cosmesis for enhanced quality of life. It can also serve to enhance a patient's hearing by way of sound conduction if the internal ear structures are still intact.

The conventional workflow for fabrication of an auricular prosthesis is an intricate, multi-step process that is labor intensive and challenging to

ENSURE A HIGH DEGREE OF REALISM, PRECISION, AND PATIENT ACCEPTANCE. COMPUTER-AIDED DESIGN AND COMPUTER-AIDED MANUFACTURING (CAD/CAM) HAVE REVOLUTIONIZED THE PROSTHETIC FABRICATION PROCESS BY ENHANCING PREDICTABILITY, OPTIMIZING THE RECREATION OF ANATOMICAL DEFICITS, AND REDUCING PATIENT APPOINTMENT TIMES. AMONG THE PUBLISHED LITERATURE, THERE IS A LACK OF STANDARDIZATION IN PROTOCOL GOING FROM FACIAL DATA ACQUISITION AND DESIGN TO FINAL PROSTHETIC FABRICATION.

THIS CASE HIGHLIGHTS AN 87-YEAR-OLD MALE PATIENT THAT WAS DIAGNOSED WITH BASAL CELL CARCINOMA OF RIGHT EAR AND WAS REFERRED TO THE DEPARTMENT OF ORAL ONCOLOGY AND MAXILLOFACIAL PROSTHETICS AT ERIE COUNTY MEDICAL CENTER FOR FABRICATION OF AN IMPLANT-RETAINED AURICULAR PROSTHESIS. HE IS STATUS POST TOTAL AURICULECTOMY WITH SPLIT THICKNESS SKIN GRAFT RECONSTRUCTION AND PLACEMENT OF CRANIOFACIAL IMPLANTS (FIGURE 1A). A COMBINED ANALOG AND DIGITAL WORKFLOW WAS USED FOR PROSTHETIC FABRICATION (FIGURE 1B). A DIGITIZED SCAN OF THE CONTRALATERAL EAR WAS MADE UTILIZING AN ARTEC 3D FACIAL SCANNER (ARTEC 3D EVA 3D SCANNER) (FIGURE 2A) AND A CONVENTIONAL FACIAL MOULAGE IMPRESSION WAS MADE USING POLYVINYLSILOXANE IMPRESSION (PVS) (FIGURE 2B). A CAST WAS POURED IN TYPE IV STONE (SILKY ROCK, WHIPMIX). A SCAN OF THE MODEL WAS MADE USING TRIOS 5 SCANNER (FIGURE 2B). THE MODEL SCAN AND FACIAL SCAN WERE MARRIED TOGETHER ACCORDING TO THEIR FIDUCIAL MARKERS. THE

FACIAL SCAN WAS MIRRORED USING AUTODESK MESHMIXER SOFTWARE (SAN RAFAEL, CALIFORNIA) AND THEN ADAPTED TO THE SCANNED ANALOG CAST (FIGURE 3) TO FABRICATE A PROTOTYPE FOR THE ABSENT AURICLE (FIGURE 4A). PROTOTYPES FOR THE AURICULAR PROSTHESIS WERE PRINTED IN PURPLE HIGH RESOLUTION CASTING WAX (FIGURE 4C) USING THE PARAFFIN WAX PRINTER (WAXJET 410 PRINTER, SOLIDSCAPE INC, MERRIMACK, NH, USA) (FIGURE 4B). BEFORE MODIFICATIONS TO MARGINS WERE MADE, THE WAX WAS TRIED ON THE PATIENT AND ACCURATE SEATING AND TISSUE ADAPTATION WAS CONFIRMED (FIGURE 5A, B, C). AFTER FINALIZATION, THE WAX PROTOTYPE WAS USED TO PICK-UP THE AURICULAR IMPLANT MAGNET HOUSINGS (LONG LIP MAXI, TECHNOVENT) WITH ACRYLIC AND PVS, AND WAS CONVENTIONALLY PROCESSED WITH A STONE MOLD UTILIZING THE LOST WAX TECHNIQUE FOR SILICONE PROCESSING (FIGURE 6A). AT THE DELIVERY APPOINTMENT, THE PROSTHESIS WAS PLACED ON THE PATIENT AND EXTRINSIC SILICONE PIGMENTS WERE APPLIED (FIGURE 6B, C).

CONCLUSION

THE UTILIZATION OF DIGITAL TECHNOLOGY FOR FABRICATION OF THIS AURICULAR PROSTHESIS ALLOWED FOR AN OPTIMAL ESTHETIC OUTCOME WITH REDUCED LABORATORY AND CLINICAL TIME COMPARED TO A CONVENTIONAL WORKFLOW.

COST-EFFECTIVE REHABILITATION OF OCULAR AND ORBITAL DEFECTS IN THE REGIONS OF INDIA AND MALAYSIA: CASE STUDY

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MAXILLOFACIAL PROSTHESES RESTORE SEVERAL TYPES OF OROFACIAL DEFECTS AS WELL AS IMPROVE THE PATIENT'S QUALITY OF LIFE. THE DEFECTS IN THE OROFACIAL REGION ARE A MAJOR CONCERN IN THIS SOCIALLY PRODUCTIVE ERA. THE REHABILITATION OF THESE MASSIVE DEFECTS IN THE ORAL AND MAXILLOFACIAL REGION POSES A CHALLENGE TO THE PROSTHODONTIST IN TERMS OF SELECTION OF MATERIAL, RETENTIVE AIDS, THE ADAPTIVE CAPABILITY OF THE PATIENT, AND COST. THE PRESENT POSTER DESCRIBES THE CONVENTIONAL COST-EFFECTIVE REHABILITATION OF OCULAR AND ORBITAL DEFECTS TO IMPROVE THE PATIENT?S FACIAL ESTHETICS AND QUALITY OF LIFE, IN INDIA AND MALAYSIA REGIONS.

Complications of Jaw-in-a-Day (JIAD): A Retrospective Analysis

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The Jaw-in-a-Day (JIAD) procedure has revolutionized the treatment of head and neck cancers since its introduction in 2007. By combining complex reconstructive surgery with immediate prosthetic rehabilitation, JIAD offers patients improved quality of life and reduced treatment time compared to traditional approaches.

Despite its growing popularity, the specific complications associated with JIAD remain understudied. While the risks associated with fibula free flap (FFF) jaw reconstruction and malignant head and neck cancer treatments are well-documented, the unique challenges posed by JIAD require further investigation.

This study aims to address this knowledge gap by systematically analyzing the clinical findings and management of complications encountered in a series of JIAD cases. We will provide valuable insights into the potential complications of JIAD.

Our analysis will focus on identifying and characterizing the specific complications associated with JIAD, including hardware exposure, implant loss, delayed wound healing, poorly fitting prostheses, and other issues that may affect patient outcomes. We will also explore the factors that contribute to these complications and the effectiveness of various management strategies.

By understanding the risks and challenges associated with JIAD, we can refine the technique and develop more effective strategies for preventing and managing complications. This will ultimately improve the overall outcomes for patients undergoing this innovative procedure.

This study will contribute to the ongoing development of JIAD and ensure that patients receive the highest quality of care possible.

PROSTHETIC REHABILITATION OF A PATIENT WITH DENTAL IMPLANTS AFTER CONSERVATIVE TREATMENT OF ODONTOGENIC KERATOCYST

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THE PRESENT CASE AIMS TO REPORT AN EXTENSIVE OKC INVOLVING THE BODY OF THE MANDIBLE, CROSSING MIDLINE TREATED WITH CONSERVATIVE TREATMENT, INCLUDING MARSUPIALIZATION AND ENUCLEATION, FOLLOWED BY IMPLANT PLACEMENT AND RESTORATION BY AN IMPLANT-SUPPORTED BRIDGE.

A 70-YEAR-OLD MALE WITH A PREVIOUS HISTORY OF COLON CANCER PRESENTED TO THE COLLEGE OF DENTISTRY AT THE UNIVERSITY OF MANITOBA IN 2020 WITH A COMPLAINT OF 3 WEEKS OF PAIN AND SWELLING IN THE LEFT SIDE OF THE MANDIBLE. AFTER A HISTOLOGICAL AND RADIOLOGICAL EXAMINATION, IT WAS DIAGNOSED AS AN INFLAMED ODONTOGENIC KERATOCYST WITH SCALLOPED BORDERS EXTENDING FROM THE MESIAL AREA OF 38 TO 42. ON CLINICAL EXAMINATION, THE INVOLVED AREA HAS VESTIBULAR SWELLING APPARENT TO 34, NUMBNESS, AND PALPABLE LYMPH NODES ON THE LEFT SIDE. SURGICAL TREATMENT INCLUDED MARSUPIALIZATION WITH A TUBE PLACED IN THE CYST TO ASSIST IN DRAINING THE CYST

content in December 2020, which significantly decompressed the size of the lesion in one year. In November 2021, Enucleation and Curettage of the cyst was performed with loss of teeth from 33 to 36.

New bone was regenerated in the cystic cavity without the use of grafts. In February 2024, three implants were placed in the left mandible and successfully restored using three Customized titanium abutments and cemented Zirconia restorations. The patient has been scheduled for regular follow-up appointments to check for biological or technical complications.

SOFT PALATE OBTURATOR FABRICATION INCORPORATING COMPUTER-AIDED DESIGN AND SELECTIVE LASER SINTERING TECHNOLOGY: A CLINICAL REPORT

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THIS ARTICLE REPORTS AN APPROACH TO FABRICATE A DEFINITIVE MAXILLARY SOFT PALATAL OBTURATOR USING THE COMPUTER-AIDED DESIGN AND COMPUTER-AIDED MANUFACTURING (CAD-CAM) PROCESS. THE PICK-UP INTERIM OBTURATOR IMPRESSION WAS SCANNED, AND THE 3D VIRTUAL CAST WAS PRINTED. MAXILLARY DEFINITIVE IMPRESSION WAS MADE TO FABRICATE MAXILLARY DEFINITIVE STONE CAST THEN SCANNED. A CAD SOFTWARE PROGRAM WAS USED TO SURVEY AND BLOCK-OUT THE DEFINITIVE VIRTUAL CAST AND TO DESIGN THE FRAMEWORK. THE DEFINITIVE COBALT-CHROMIUM FRAMEWORK WAS FABRICATED BY USING 3-DIMENSIONAL (3D) SELECTIVE LASER SINTERING (SLS) TECHNOLOGY. THE FRAMEWORK WAS THEN SEATED ON THE 3D PRINTED CAST AND URETHANE DIMETHACRYLATE MATERIAL WAS FILLED THE ACQUIRED MAXILLARY DEFECT AND LIGHT POLYMERIZED. THE FRAMEWORK WAS THEN TRIED, FITTED IN THE PATIENT MOUTH AND REMOVED. THE ACQUIRED MAXILLARY DEFECT WAS TRACED USING A RESILIENT DENTURE ACRYLIC

RELINING MATERIAL AND THE POLYMERIZED URETHANE DIMETHACRYLATE MATERIAL. THE OBTURATOR PROSTHESIS WAS CONVENTIONALLY PROCESSED USING THE LOST-WAX PROCESSING TECHNIQUE WITH HEAT-POLYMERIZED ACRYLIC RESIN.

A DEFINITIVE OBTURATOR PROSTHESIS WITH ACCEPTABLE FIT, FUNCTION, AND REDUCED CHAIR-TIME AS WELL AS REDUCED LABORATORY WORKING TIME WAS ACHIEVED BY UTILIZING CAD SOFTWARE PROGRAM, SELECTIVE LASER SINTERING TECHNOLOGY AND RAPID PROTOTYPING.

Novel Fabrication of a 3D Printed Bilaminar Burn Orthosis

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Head and neck burn patients face high risk for developing hypertrophic scars. Early intervention for head and neck burn injury includes correct head and neck positioning, splinting, and occupational therapy. Burn masks or orthoses using pressure and silicone are commonly used by burn patients as one of treatment modalities to reduce hypertrophic scarring and muscle contracture. Custom pressure burn masks can specify distribution of pressure on the affected areas, which ensures effective therapy. Burn masks have conventionally been fabricated by skilled clinicians which was a time and labor intensive process that included making a physical impression, making a mold, and using a thermoplastic material and silicone layer. In this case presentation, a fully digital workflow is demonstrated where a patient with full and partial thickness burns to the anterior neck was treated with a burn orthosis. The burn orthosis was fabricated using a phone 3D scanner app and a 3D printer, which did not require

ANY CONTACT TO THE PATIENT'S BURNED, UNHEALED SKIN. EMPLOYING A RECENTLY RELEASED SOFT BIOCOMPATIBLE RESIN, A 3D PRINTED BILAMINAR BURN ORTHOSIS WAS CREATED, WITH SOFT LINING FACING THE TISSUE AND A HARD BIOCOMPATIBLE OUTER SHELL. USING A PHONE 3D SCANNER APP AND A 3D PRINTER, A BILAMINAR BURN ORTHOSIS CAN EASILY BE FABRICATED.

Conservative management of unfavorable tooth morphology for retaining a maxillary obturator: a case report

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Gingival convergence of abutment teeth has been identified as an important factor that affects the retentive capability of removable partial denture clasps. Gingival convergence is the angle formed between the tooth surface below the height of contour and a vertical line created by the analyzing rod of a surveyor. Treatment options for addressing unfavorable gingival convergence include: 1) subtractive contour modification by preparing a dimple undercut, 2) additive contour modifications using direct composite resin buttons, 3) indirect full coverage surveyed crowns, or 4) surgical crown lengthening to expose the submerged undercut. This case report presents a conservative prosthodontic technique utilizing surveyed veneers in the rehabilitation of a 23 year old patient following a partial maxillectomy for a low grade mucoepidermoid carcinoma of the left hard palate. The initial clinical exam revealed short

CLINICAL CROWNS WITH MINIMAL GINGIVAL CONVERGENCE, SUGGESTIVE OF ALTERED PASSIVE ERUPTION, WHICH WOULD SIGNIFICANTLY AFFECT THE RETENTION OF THE FUTURE OBTURATOR PROSTHESIS. OWING TO THE PATIENT?S AGE AND FUTURE MAXILLOFACIAL PROSTHETIC NEEDS, LITHIUM DISILICATE VENEER RESTORATIONS WERE SELECTED AS A CONSERVATIVE YET ESTHETIC AND DURABLE MEANS TO INCREASE THE GINGIVAL CONVERGENCE OF THE PLANNED ABUTMENT TEETH. TEETH # 3 AND #11 WERE WAXED TO FULL CONTOUR AND SURVEYED TO ENSURE THE APPROPRIATE UNDERCUT AND GINGIVAL CONVERGENCE WERE PRODUCED IN THE DEFINITIVE VENEERS. THE DEFINITIVE LITHIUM DISILICATE VENEERS WERE SURVEYED PRIOR TO INSERTION TO VERIFY THE GINGIVAL CONVERGENCE. THE VENEERS WERE BONDED TO THEIR ABUTMENT TEETH UTILIZING A TOTAL ETCH TECHNIQUE WITH ALL BOND UNIVERSAL PRIMER & BOND RESIN AND NEXUS NX3 LIGHT CURE RESIN CEMENT. REST PREPARATIONS WERE MADE AND A FINAL IMPRESSION FOR THE DEFINITIVE OBTURATOR FRAMEWORK WAS MADE WITH LIGHT BODY POLYVINYL SILOXANE IMPRESSION MATERIAL. FRAMEWORK FIT WAS CHECKED AND APPROPRIATE ENGAGEMENT OF THE UNDERCUTS ON THE #3 AND #11 VENEERS BY THE DIRECT RETAINERS WERE VERIFIED. AN ALTERED CAST FUNCTIONAL IMPRESSION WAS MADE WITH IMPRESSION COMPOUND AND IMPRESSION WAX. THE OBTURATOR WAS PROCESSED, FITTED AND DELIVERED WITHOUT INCIDENT.

Using Fixed Prosthetic Reconstructions as a Base for Anchorage and Occlusal Support

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Patients being seen for complex maxillofacial reconstruction after tumor ablative surgery require advanced planning. These patients can be treated with a variety of prosthetic designs that should be envisioned advance of the reconstructive surgery. Often, distribution of implants is predictive of prosthesis survival and these patients benefit from this advanced planning. A case series of patients will be evaluated after reconstruction of oral defects to determine the incidence and amount of unscheduled visits.

Time Taken for Retreatment of Fixed Maxillofacial Reconstructions

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Patients referred for reconstruction of jaw defects following tumor ablative surgery often undergo multiple restorative procedures to restore oral function. Some of these cases involve adjuvant therapy and are vulnerable to the effects of radiation therapy, and other compromise that is resultant of therapy. This presentation will analyze a case series of patients in the Mayo Clinic practice that have required retreatment. It is the intention that sharing of this data will alert other teams as to the potential and timing of retreatment that often accompanies this casework.

Prosthetic Augmentation of a Surgically Reconstructed Mid-Facial Defect

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This clinical presentation describes the prosthetic augmentation of a surgically reconstructed midfacial defect of a patient initially diagnosed with squamous cell carcinoma of the skin of the infraorbital and nasal region with invasion into the maxilla. He underwent wide local excision with removal of the left upper lip, total rhinectomy, bilateral maxillectomy, resection of the upper lip, left neck dissection, anterolateral thigh (ALT) free flap reconstruction, followed by postoperative radiation therapy. Nasolabial facial and removable dental prostheses were fabricated to augment the surgically reconstructed midfacial defect and to improve esthetic and functional outcomes.

Interim Mandibular Advancement Device used in Conjunction with an Immediate Surgical Prosthesis during the Early Postoperative Period

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Introduction: Obstructive sleep apnea (OSA) is increasingly recognized as a comorbidity in head and neck cancer (HNC) patients. While continuous positive airway pressure (cPAP) is the standard treatment, its resumption poses risks in the early postoperative period. This case report explores the use of a custom interim mandibular advancement device combined with a surgical prosthesis to facilitate postoperative care and manage OSA in a HNC patient.

Case Report: A 32-year-old male with OSA managed by cPAP underwent surgical resection of a sclerosing odontogenic carcinoma, followed by split thickness skin graft reconstruction. Given the surgeon recommendation for suspension of cPAP during the initial three weeks post-surgical timeframe, a custom oral prosthesis was designed to provide palatal protection and facilitate mandibular advancement.

Technique: Maxillary and mandibular impressions were obtained, and models were digitized for the fabrication of a palatal protection prosthesis and occlusal splints using CAD/CAM technology. The mandibular advancement was set at +2 mm, 70% of the patient?s maximum protrusion. The prostheses were verified for complete intraoral seating and delivered at the time of surgery.

Discussion: The patient tolerated the palatal protection component but experienced discomfort with the mandibular advancement device, attributed to postoperative inflammation with associated trismus and lack of adaptation time to the appliance. Reductions in vertical dimension and protrusion were identified as opportunities to improve the design for comfort and efficacy. Acclimatization strategies prior to surgery could further improve patient outcomes.

Conclusion: Interim mandibular advancement devices and this technique offer a customizable alternative for managing OSA in HNC patients during the early postoperative period when cPAP use is contraindicated. Future studies should explore optimal device design and patient selection to maximize therapeutic benefits.

Maxillary Osteomyelitis Induced by Mucormycosis: Rehabilitation Using an Obturator with a Swing-Lock Partial Denture Design with Dental Implants

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Background/Introduction: Mucormycosis is a rare, aggressive fungal infection primarily affecting immunocompromised individuals, leading to significant bone destruction and osteomyelitis. The infection's progression involves vascular invasion, causing thrombosis and necrosis of tissues. This report presents a case involving substantial maxillary defect, rehabilitated using an Obturator with a Swing-Lock partial denture design. This innovative design offers effective functional and esthetic restoration in complex clinical scenarios.

Methods: An 80-year-old male with mucormycosis-induced maxillary bone loss and osteomyelitis underwent surgical debridement, left maxillectomy, and antifungal therapy. For prosthetic rehabilitation, a custom Obturator with a Swing-Lock partial denture design was designed to enhance retention and stability, utilizing a labial bar framework engaging remaining abutments

(DENTAL IMPLANTS AT POSITIONS #4 AND #3) AND TISSUE UNDERCUTS, WITH A HINGE MECHANISM TO REDUCE TRAUMA DURING INSERTION AND REMOVAL.

RESULTS: THE OBTURATOR WITH A SWING-LOCK PARTIAL DENTURE DESIGN PROVIDED EFFECTIVE FUNCTIONAL RETENTION AND ESTHETIC RESTORATION, EVENLY DISTRIBUTING MASTICATORY FORCES AND MINIMIZING MUCOSAL TRAUMA. OVER 12 MONTHS, THE PROSTHESIS SHOWED EXCELLENT STABILITY, PATIENT COMFORT, AND IMPROVED ORAL FUNCTION.

CONCLUSION: THE OBTURATOR WITH A SWING-LOCK PARTIAL DENTURE DESIGN IS A VIABLE PROSTHETIC SOLUTION FOR EXTENSIVE MAXILLARY DEFECTS WITH ABUTMENT TEETH REMAINING CAUSED BY OSTEOMYELITIS SECONDARY TO MUCORMYCOSIS. ITS DESIGN ENHANCES RETENTION, STABILITY, AND PATIENT COMFORT, ADDRESSING COMPLEX ANATOMICAL AND FUNCTIONAL CHALLENGES EFFECTIVELY. FURTHER RESEARCH IS RECOMMENDED TO ASSESS THE LONG-TERM OUTCOMES AND EFFICACY OF THIS APPROACH IN SIMILAR CASES INVOLVING INTEGRATED DENTAL IMPLANTS.

The Effects of a Night Denture with an Obturator for Maxillectomy Patients: A Case Report

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IPurpose: Night dentures are oral appliances commonly designed to alleviate sleep bruxism and temporomandibular joint disorders by reducing excessive occlusal forces. Maxillectomy patients often report dryness and fatigue in the oral muscles due to the loss of lip support. This case report presents the effects of a new type of night denture with an obturator in patients with maxillary defects.

Patients and Methods: A 71-year-old woman, diagnosed with squamous cell carcinoma

(T1N0M0), underwent a maxillectomy resulting in an Aramany Class VI defect and was fitted with an obturator. She reported fatigue in the lips and masticatory muscles during the night, and a shining spot on her molar metal crown suggested sleep bruxism.

A 72-year-old man, also diagnosed with squamous cell carcinoma (T1N0M0), underwent a maxillectomy with an Aramany Class VI defect and exhibited habitual sleep bruxism. He reported mobility in his abutment teeth.

The maxillomandibular relationship, with the mandibular condyles in centric relation, was recorded using silicone bite registration material (Correct Plus, PENTRON, CA, USA). After mounting the stone casts in the articulator, the vertical occlusal dimension was increased by 2 mm, and the occlusal splint of the night denture was fabricated to cover the occlusal surfaces of the remaining teeth. For optimal support, the night denture was designed to cover the defect and receive full support from the residual ridges. Full balanced occlusion was employed for the lateral occlusal pattern of the night denture.

The effectiveness of the night denture was evaluated using the Visual Analog Scale (VAS).

Results: Oral dryness, muscle fatigue, fatigue of the abutment teeth, and ease of breathing were assessed. Both patients expressed satisfaction with

THE NIGHT DENTURE AND EXPERIENCED A REDUCTION IN ORAL DRYNESS AND MUSCLE FATIGUE DURING SLEEP.

CONCLUSIONS: MAXILLECTOMY PATIENTS WITH SLEEP BRUXISM OFTEN EXPERIENCE FATIGUE IN THE ABUTMENT TEETH, AS WELL AS IN THE ORAL AND MASTICATORY MUSCLES. THE NIGHT DENTURE WITH AN OBTURATOR OFFERS A PROMISING SOLUTION TO ALLEVIATE THESE SYMPTOMS.

Patient Specific Obturation Prosthesis for Effective Management of Neck Fistulas in the Irradiated Head and Neck patient: A Case Report

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Background: The management of neck fistulas in head and neck cancer patients post-resection and radiotherapy presents significant clinical challenges. Traditional surgical closure methods may be limited due to morbidity or even mortality risks, necessitating alternative approaches. This case report examines the effectiveness of a custom extraoral obturator prosthesis for managing a persistent pharyngocutaneous fistula in an irradiated patient.

Case Presentation: A 72-year-old male with squamous cell carcinoma of the right vocal cord underwent definitive radiotherapy (70 Gy) and subsequent total laryngectomy with modified neck dissection. Following surgery, he developed a pharyngocutaneous fistula in the left neck region. Initial surgical attempts at closure led to complications, resulting in persistent saliva drainage and dietary leakage. With high surgical

RISK AND LIMITED OPTIONS, A NON-SURGICAL INTERVENTION WAS WARRANTED.

TECHNIQUE: AN INTERIM PHARYNGOCUTANEOUS OBTURATOR WAS INITIALLY FABRICATED USING TRADITIONAL IMPRESSION TECHNIQUES AND POLYMETHYL METHACRYLATE. THIS DESIGN SERVED AS A CUSTOM TRAY FOR A FUNCTIONAL IMPRESSION, LEADING TO A FINAL OBTURATOR MADE FROM SILICONE. COLLABORATIVE EVALUATIONS WITH PROSTHODONTICS AND OTOLARYNGOLOGY TEAMS UTILIZED FLEXIBLE NASOPHARYNGOSCOPY TO ASSESS FIT, FUNCTIONALITY, AND ADAPTATION. ALTERATIONS TO THE INTERNAL PRESSURE AND DESIGN WERE COMPLETED BASED ON COLLABORATIVE EVALUATIONS. A FINAL PROSTHESIS WITH BOTH AN INTERNAL AND EXTERNAL FLANGE WITH CUSTOMIZED PRESSURE AND ADAPTATION WAS ULTIMATELY DEVELOPED.

RESULTS: THE CUSTOMIZED OBTURATOR EFFECTIVELY REDUCED FLUID LEAKAGE DURING SWALLOWING, ACHIEVING A MAINTAINABLE SEAL. THE PATIENT REPORTED INCREASED COMFORT AND FUNCTIONALITY, ALLOWING FOR LIMITED ORAL INTAKE, PREVIOUSLY UNATTAINABLE DUE TO THE FISTULA. FOLLOW-UP EXAMINATIONS DEMONSTRATED SUSTAINED EFFECTIVENESS OF THE OBTURATOR WITHOUT THE NEED FOR FURTHER SURGICAL INTERVENTION.

CONCLUSION: THIS CASE UNDERSCORES THE POSITIVE OUTCOMES ASSOCIATED WITH A PATIENT-SPECIFIC PHARYNGOCUTANEOUS OBTURATOR PROSTHESIS IN

MANAGING COMPLEX NECK FISTULAS WHEN SURGICAL OPTIONS ARE LIMITED. THE MULTIDISCIPLINARY APPROACH TO FABRICATION AND FOLLOW-UP CARE HIGHLIGHTS THE POTENTIAL FOR TAILORED DEVICES TO IMPROVE QUALITY OF LIFE IN SIMILAR CLINICAL SCENARIOS, CONTRIBUTING TO THE GROWING EVIDENCE FOR THEIR APPLICATION IN HEAD AND NECK CANCER MANAGEMENT.

Incorporating 3D Technologies into Traditional Auricular Prosthesis Workflows: Innovating Resin Acrylic Substructure Design

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Reconstructive surgery for ear deformities poses a significant challenge for surgeons aiming to achieve optimal aesthetic outcomes. Implant-retained silicone auricular prostheses offer an alternative for patients with ear deformities. These prostheses, featuring a resin acrylic substructure with magnetic or clip attachments, effectively secure the auricular prosthesis and have proven to be a reliable treatment option. However, the limited space beneath the auricular prosthesis for accommodating the resin acrylic substructure, combined with the weak bond between the resin acrylic and the silicone prosthesis, presents challenges.

Recent advancements in CAD-CAM technology have improved the planning and design of facial prostheses. This case report aims to share an innovative method utilizing CAD-CAM technology for designing the resin acrylic substructure of the

AURICULAR PROSTHESIS, ENHANCING BOTH AESTHETIC OUTCOMES AND RETENTION MECHANISMS FOR THE SILICONE PROSTHESIS.

Bridging the Gap: U Penn's Initiative for Oral Health Equity in Young Oral Cancer Patients

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Surgical and prosthodontic reconstruction is crucial for cancer patients, significantly enhancing their quality of life by addressing facial deformities, functional disabilities, and socio-psychological challenges arising from resections. While fibula free flap reconstruction is the gold standard, fabricating conventional removable prostheses often presents difficulties due to compromised maxilla-mandibular relationships, insufficient fibular dimensions, impaired neuromuscular function, and inadequate denture-bearing areas. Osseointegrated dental implant reconstruction offers an optimal solution, but prohibitive costs limit its accessibility for many patients. At Massachusetts General Hospital, only 38.6% of patients received implants after mandibular resection, primarily due to cost, and rates in other centers are as low as 2.3%.

While breast cancer care has advanced significantly since the 1998 Women's Health and Cancer Rights Act (WHCRA) mandated insurance

COVERAGE FOR RECONSTRUCTION, ORAL CANCER PATIENTS CONTINUE TO FACE SUBSTANTIAL BARRIERS TO SIMILAR CARE. NEVERTHELESS, THE SUCCESS IN BREAST RECONSTRUCTION DEMONSTRATES THE TRANSFORMATIVE POTENTIAL OF PERSISTENT ADVOCACY.

ADOLESCENTS AND YOUNG ADULT CANCER PATIENTS ENCOUNTER ADDITIONAL CHALLENGES, INCLUDING HIGHER RATES OF PSYCHOLOGICAL DISTRESS, POORER MENTAL HEALTH, AND HEIGHTENED CONCERNS ABOUT FACIAL DISFIGUREMENT, SPEECH DIFFICULTIES, AND REDUCED QUALITY OF LIFE.

AT PENN DENTAL MEDICINE, HEALTHCARE PROVIDERS ARE SPEARHEADING AN INITIATIVE TO PROVIDE COMPREHENSIVE ORAL REHABILITATION FOR LOW-INCOME YOUNG CANCER SURVIVORS. THE PENN CENTER FOR INNOVATIVE & PERSONALIZED ORAL REHABILITATION IS NOT ONLY DRIVING CARE BUT ALSO ACTIVELY FUNDRAISING TO ENSURE THAT ADOLESCENTS AND YOUNG ADULTS SURVIVING ORAL CANCERS HAVE ACCESS TO LIFE-CHANGING TREATMENTS.
ONE OF THE MANY CASES INVOLVED A 16-YEAR-OLD AMELOBLASTOMA SURVIVOR WHO HAD ENDURED SIGNIFICANT CHALLENGES DUE TO FACIAL DISFIGUREMENT, CHEWING DIFFICULTIES, AND SPEECH IMPAIRMENTS FOLLOWING CANCER TREATMENT. BEFORE RECEIVING CARE, THIS YOUNG PATIENT STRUGGLED NOT ONLY WITH PHYSICAL LIMITATIONS BUT ALSO WITH THE EMOTIONAL AND SOCIAL IMPACTS OF THEIR CONDITION, AFFECTING THEIR CONFIDENCE AND DAILY LIFE. AFTER UNDERGOING ORAL REHABILITATION, THE PATIENT EXPERIENCED A PROFOUND

TRANSFORMATION. THE SURGICAL AND PROSTHODONTIC INTERVENTIONS RESTORED ESTHETICS AND FUNCTIONS, ALLOWING THE PATIENT TO RECLAIM SELF-ESTEEM. THROUGH THESE EFFORTS, THE TEAM IS MAKING A LASTING IMPACT ON THE LIVES OF LOW-INCOME VULNERABLE YOUNG PATIENTS, EMPOWERING THEM TO MOVE FORWARD WITH CONFIDENCE AND DIGNITY. PENN DENTAL MEDICINE IS SETTING NEW STANDARDS IN PATIENT CARE AND HEALTH EQUITY, ENSURING THAT LOW-INCOME YOUNG CANCER SURVIVORS ARE NOT LEFT BEHIND.

NOVEL APPROACH FOR MEASURING MANDIBULAR DEVIATION IN SEGMENTAL MANDIBULECTOMY PATIENTS: TECHNIQUE AND VALIDATION

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TO DEMONSTRATE AND VALIDATE THE NEWER TECHNIQUE OF MEASURING MANDIBULAR DEVIATION IN SEGMENTAL MANDIBULECTOMY PATIENT

MEDIOLATERAL DEVIATION MEASUREMENT PROTOCOL:

MEDIOLATERAL DEVIATION (MLD)= A- (B+C)

A = DISTANCE MEASURED FROM THE BUCCAL CUSP OF MAXILLARY TEETH TO THE LINGUAL CUSP OF MANDIBULAR TEETH (NON-RESECTED SITE)

B= DISTANCE MEASURED BETWEEN BUCCAL AND PALATAL CUP OF MAXILLARY TEETH (NON-RESECTED SITE)

C= Distance measured between central fossa of mandibular teeth to the lingual cusp teeth (non-resected site)
So MLD is the distance between the palatal cusp tip of maxillary teeth and the central fossa of mandibular teeth in the horizontal plane/ occlusal plane

Clinical steps:

1. Sectional impression of maxillary and mandibular arches (non-resected site) in the sectional tray (stock/customized depending on mouth opening) using Irreversible hydrocolloid impression material (Alginate). Model making in Type 3 dental stone.
2. Bite registration on the wooden tongue spatula/blade using additional silicone putty material. The patient is asked to close the teeth of the non-resected side on its own without using manual assistance to guide the mandible (neither by the patient nor by the surgeon)
3. Mounting of the model using bite (either on dog bite or 3-pin articulator).
4. Measurement of the deviation as per the above-described reference points using metal scale and metal divider in premolars and molar regions.

Study Design Retrospective in vitro study on patient's dental model.
Target Population- Mandibulectomy patient?s model for whom GBP is already given.

STUDY METHODOLOGY-

4 INDEPENDENT EXAMINERS MEASURED MEDIOLATERAL DENTAL DEVIATION ACCORDING TO THE PROTOCOL ON THE MODELS OF MANDIBULECTOMY PATIENTS.

ALL EXAMINERS HAVE READ AND UNDERSTOOD THE TECHNIQUE PROTOCOL BEFORE STARTING THE STUDY MEASUREMENTS.

BLINDING: ALL EXAMINERS WERE BLINDED TO EACH OTHER'S DATA. ALL MODELS WERE GIVEN ANONYMOUS IDS FROM S. NO 1- 30 AND EACH EXAMINER RECEIVED THEM IN A RANDOM ORDER. RANDOMIZATION DUTY WILL BE ALLOTTED TO THE DENTAL TECHNICIAN (NOT THE PART OF DEVIATION MEASUREMENT EXAMINER TEAM) AND DATA ANALYSIS WAS PERFORMED BY AN ANONYMOUS PERSON FROM ANOTHER DEPARTMENT WHO HAS NO ACCESS TO THE STUDY MODEL AND TECHNIQUE.

THE MEDIOLATERAL DEVIATION WAS MEASURED ON THE PREVIOUSLY MOUNTED 30 MODELS BY 4 EXAMINERS AS PER DEVELOPED PROTOCOLS. MEDIOLATERAL MEASUREMENTS WERE DONE IN THE 1ST & 2ND PREMOLAR AND 1ST & 2ND MOLAR REGIONS. AS MOLAR TEETH HAVE MESIAL AND DISTAL CUSPS, TWO MEASUREMENTS WERE MADE FOR EACH MOLAR TOOTH. IN CASE OF MISSING TEETH, NO DATA WOULD BE ENTERED.

THE INTER-EXAMINER RELIABILITY WAS ANALYZED FOR EACH MEASUREMENT BY INTER-CLASS CORRELATION COEFFICIENTS USING SPSS VERSION 25.

THE MEDIOLATERAL DEVIATION WAS MEASURED ON THE PREVIOUSLY MOUNTED 30 MODELS BY 4 EXAMINERS AS PER DEVELOPED PROTOCOLS. MEDIOLATERAL MEASUREMENT

WAS DONE IN THE 1ST & 2ND PREMOLAR AND 1ST & 2ND MOLAR REGIONS. AS MOLARS HAVE MESIAL AND DISTAL CUSPS, TWO MEASUREMENTS WERE MADE FOR EACH MOLAR. THE INTER-EXAMINER RELIABILITY WAS ANALYZED FOR EACH MEASUREMENT. THE CRONBACH'S ALPHA VALUES OF EACH MEASUREMENT ARE GREATER THAN 0.9 SUGGESTING

THE INTERCLASS CORRELATION COEFFICIENTS FOR THE AGREEMENT BETWEEN 4 EXAMINERS FOR 1ST PRE MOLAR 0.938, 2ND PRE MOLAR 0.968, 1ST MOLAR 0.898, 2ND MOLAR 0.737 AND AVERAGE 0.939, ALL SIGNIFICANTLY DIFFERENT FROM ZERO (P _ 0.001), AND ALL INDICATING AGREEMENT FROM GOOD TO EXCELLENT.

TILL NOW, THERE IS NO OBJECTIVE METHOD AVAILABLE FOR THE CALCULATION OF DEVIATION IN THE BACK TEETH REGION. LITERATURE SHOWS ONLY DENTAL MIDLINE AND SOFT TISSUE DEVIATION WHICH CANNOT BE CORRELATED WITH ORAL FUNCTIONS LIKE CHEWING.

THIS STUDY SHOWED THAT THE MEDIOLATERAL DENTAL DEVIATION MEASUREMENT TECHNIQUE IN MANDIBULECTOMY PATIENTS USING THE PRESENT METHODS IS A SIMPLE, RELIABLE, AND REPRODUCIBLE METHOD FOR MEASURING.
BY QUANTIFYING THE DEGREE OF DEVIATION IN MILLIMETERS USING THIS NOVEL METHOD, CLINICIANS CAN ASSESS THE PREVALENCE AND SEVERITY OF MANDIBULAR DEVIATION AT VARIOUS TIME INTERVALS FOLLOWING SURGERY. THIS CAN ALSO BE USED TO CLASSIFY THE SEVERITY OF MANDIBULAR DEVIATION POST-MANDIBULECTOMY PATIENTS. THIS IS THE

FIRST OBJECTIVE METHOD THAT CAN BE USED TO COMPARE DIFFERENT PATIENT GROUPS BASED ON FACTORS LIKE EXTENT OF DEFECT, RADIATION TREATMENT, AND PROSTHESIS USE.

COMPARISON BETWEEN CONVENTIONAL AND DIGITAL IMPRESSIONS FOR FABRICATION OF OBTURATOR FOR PATIENTS WITH MAXILLECTOMY DEFECTS

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THIS STUDY AIMED TO PROSPECTIVELY DETERMINE THE HRQOL MEASURED BY THE UNIVERSITY OF WASHINGTON-QUALITY OF LIFE VERSION-4 (UW-QOL V 4)

QUESTIONNAIRE TO COMPARE CONVENTIONAL AND DIGITAL IMPRESSIONS FOR THE FABRICATION OF AN OBTURATOR FOR PATIENTS WITH MAXILLECTOMY DEFECTS.

PATIENTS WITH MAXILLARY DEFECTS WHO REQUIRED ORAL REHABILITATION WITH OBTURATORS WERE SELECTED FOR THIS CLINICAL STUDY BETWEEN 2023 AND 2024. THE PARTICIPANTS WERE RANDOMLY DIVIDED INTO TWO GROUPS. ONE GROUP OF PARTICIPANTS RECEIVED OBTURATORS MADE USING CONVENTIONAL IMPRESSIONS AND STONE CASTS WHILE FOR THE OTHER GROUP, DIGITAL IMPRESSIONS WITH 3D-PRINTED CASTS WERE CREATED. ASSESSMENT OF CHANGES IN HRQOL USING UW-QOL V4 WERE RECORDED AT BASELINE AND 3 MONTHS AFTER PROSTHESIS INSERTION FOR PARTICIPANTS IN BOTH GROUPS. THE DISTRIBUTION OF VARIABLES AND DIFFERENT SCORES AMONG DIGITAL AND CONVENTIONAL METHODS WERE COMPARED USING THE WILCOXON RANK SUM TEST

FOR NUMERICAL VARIABLES OR CHI-SQUARE OR FISHER?S EXACT TEST APPROPRIATELY FOR NOMINAL VARIABLES. A GRAPHICAL PRESENTATION OF THE DISTRIBUTION OF SCORES WAS DONE WITH BOX AND WHISKER PLOTS. FOR ALL ANALYSES, A P-VALUE LESS THAN 0.05 WAS CONSIDERED STATISTICALLY SIGNIFICANT.

A COMPARISON OF MEAN SCORES BETWEEN THE OBTURATORS FABRICATED BY CONVENTIONAL AND DIGITAL IMPRESSIONS FOR PARTICIPANTS WITH MAXILLECTOMY DEFECTS WAS NOT SIGNIFICANT (P> .05 FOR ALL COMPARISONS). COMPARISON FOR THE PHYSICAL SUBSCALE SCORE AND THE SOCIAL-EMOTIONAL SUBSCALE SCORE BETWEEN THE OBTURATORS FABRICATED BY CONVENTIONAL AND DIGITAL IMPRESSIONS FOR PARTICIPANTS WITH MAXILLECTOMY DEFECTS WAS NOT SIGNIFICANT (P> .05 FOR ALL COMPARISONS).

SIGNIFICANT IMPROVEMENT WAS SEEN IN ALL THE DOMAINS OF UW-QOL V 4 AFTER REHABILITATION WITH
OBTURATORS, IN BOTH GROUPS, IRRESPECTIVE OF THE PROCEDURE TO MAKE IMPRESSIONS OF THE DEFECT. SPEECH WAS THE COMMON DOMAIN OF CONCERN BEFORE REHABILITATION FOR BOTH GROUPS OF PARTICIPANTS.

FABRICATION AND APPLICATION OF INTRA-ORAL BRACHYTHERAPY DEVICE FOR RADIATION TREATMENT Â A MEMORIAL SLOAN KETTERING EXPERIENCE

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DIFFERENT TECHNIQUES AND MODALITIES FOR RADIATION THERAPY HAVE BEEN STUDIED AND PUBLISHED. TODAY THERE IS ADVANCED TECHNOLOGY TO MINIMIZE AND CONTROL THE RADIATION FIELD HOWEVER, THERE ARE STILL DETRIMENTAL RADIATION-INDUCED TOXIC EFFECTS. BRACHYTHERAPY ALLOWS A HIGH RADIATION DOSE TO PENETRATE NEAR OR WITHIN THE TUMOR SITE WHILE REDUCING RADIATION EXPOSURE TO ADJACENT HEALTHY TISSUES. OUR GOAL WITH THIS INTRAORAL BRACHYTHERAPY DEVICE WAS TO ISOLATE AND CONTROL DOSAGE OF RADIATION TO PREVENT UNNECESSARY DETRIMENTAL SIDE EFFECTS. THE PURPOSE OF THIS CASE REPORT IS TO REVIEW THE PROSTHODONTIC, LABORATORY, AND INTERDISCIPLINARY APPROACHES NEEDED FOR FABRICATION AND APPLICATION.

THIS CLINICAL CASE REPORT REPRESENTS A SINGLE INSTITUTION'S EXPERIENCE (MEMORIAL SLOAN KETTERING CANCER CENTER, NEW YORK, NEW YORK) OF A PATIENT TREATED BY THE DENTAL SERVICE IN JULY 2024 FOR FABRICATION OF AN INTRAORAL BRACHYTHERAPY DEVICE. A

77 YEAR OLD WOMAN PRESENTING WITH RECURRENT MUCOSAL MELANOMA OF THE LEFT ORAL CAVITY/LINGUAL SURFACE OF MANDIBULAR GINGIVA WITH STAGING PT3N0M0R1 WAS FIRST SEEN BY THE RADIATION DEPARTMENT AND THEN REFERRED TO THE DENTAL SERVICE. A TOOTH/TISSUE BORNE CUSTOM HEAT POLYMERIZED ACRYLIC RESIN RADIATION CARRIER WAS DESIGNED AND FABRICATED THAT HAD THREE AFTER LOADING CATHETERS EMBEDDED IN THE PROSTHESIS. THE DEVICE WAS FITTED INTRAORALLY TO CONFIRM IT WAS FULLY SEATED IN A REPEATABLE POSITION AND THAT THE PATIENT COULD TOLERATE WEARING THE PROSTHESIS FOR TEN (10) MINUTES AS THIS WAS THE TIME FOR THE ACTUAL RADIATION TREATMENT. THE PATIENT WORE THIS DEVICE DURING RADIATION SIMULATION TO AID IN GENERATION OF THE RADIATION TREATMENT PLAN. THE RADIATION PLAN WAS DESIGNED TO DELIVER APPROXIMATELY 3000 CGY OVER FIVE FRACTIONS TO THE MUCOSAL SURFACE AND THE CATHETERS WERE POSITIONED 1-3 MM FROM THE SURFACE OF THE MUCOSAL TISSUE. RADIATION PRECAUTIONS WERE IN PLACE THROUGHOUT TREATMENT AND THERE WERE NO ACUTE COMPLICATIONS DURING TREATMENT.

RADIATION EXPOSURE TO THE ORAL CAVITY CAN CAUSE SEVERAL LIFELONG EFFECTS SUCH AS TRISMUS, OSTEORADIONECROSIS, AND DECREASED SALIVARY FLOW WHICH IN TURN CAN INCREASE OCCURRENCE OF DENTAL DECAY. THE USE OF A BRACHYTHERAPY DEVICE HELPS IN ISOLATION OF RADIATION DOSAGES. IT IS IMPORTANT THAT THE PATIENT WEARS THIS DEVICE DURING SIMULATION, IS COMFORTABLE WHILE WEARING THE DEVICE, AND THE DEVICE IS ALWAYS FULLY SEATED IN A REPEATABLE POSITION

TO ENSURE THAT RADIATION IS CONSISTENTLY DELIVERED TO THE TARGETED SITE.

UNNECESSARY RADIATION EXPOSURE CAN BE LIMITED WITH THE AID OF BRACHYTHERAPY DEVICES.

Oral Function and Nutritional Status after Maxillofacial prosthetic rehabilitation

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In this study, we report an investigation of how nutritional status relates to deficiency status and the associated oral hypofunction in patients treated with maxillofacial prosthetics.

145 participants (74 males,66 females), who were fabricated maxillofacial prostheses for the defect owing to tumor or congenital disease at Dental hospital. Aichi Gakuin University and agreed with the aim of this study were participated in this study.
Exclusion criteria (5cases) were patients who use the fixed maxillary prostheses, whose defect were localized within the soft palate and who have difficulty in communicating with others.
We classified these cases by defect area. Defect area was classified into 5 groups, maxillary defect group had 69 cases, mandibular defect 37 cases, maxillomandibular defects 11 cases, tongue defect 11 cases, cleft lip and palate 12 cases, respectively.
Oral hypofunction was diagnosed by seven tests related to the oral function, which includes oral

HYGIENE, ORAL DRYNESS, OCCLUSAL FORCE, TONGUE-LIP MOTOR FUNCTION, TONGUE PRESSURE, MASTICATORY FUNCTION, AND SWALLOWING FUNCTION. IF THE RESULTS OF TEST HAVE THREE OR MORE SIGNS OR SYMPTOMS, THEY WERE DEFINED AS ORAL HYPOFUNCTION.

THE TONGUE DEFECT GROUP SHOWED SUSCEPTIBLE MALNUTRITION OF ALL DEFECT'S GROUPS. AS FOR THE MAXILLARY DEFECTS WITH OR WITHOUT SKIN FLAPS, THOSE WITH FLAPS WERE MORE LIKELY TO BE MALNOURISHED OR AT RISK THAN THOSE WITHOUT FLAPS.

LOGISTIC REGRESSION ANALYSIS INDICATED THAT NUTRITION STATUS WAS SIGNIFICANTLY RELATED TO TONGUE DEFECTS, TONGUE- LIP MOTOR FUNCTION, TONGUE PRESSURE, AND SWALLOWING FUNCTION.

BASED ON THE RESULTS THAT TONGUE DEFECT, TONGUE LIP FUNCTION, TONGUE PRESSURE, AND SWALLOWING FUNCTION WERE PREDOMINANTLY RELATED TO THE NUTRITIONAL STATUS, TONGUE FUNCTION IS LIKELY TO BE RELATED TO NUTRITIONAL STATUS.

Significance of Preoperative Orthopedic Treatment utilizing the NAM device for children with Cleft Lip and Palate in Uzbekistan

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Introduction: Preoperative orthopedic therapy using the NAM device has been shown to significantly enhance outcomes post-cheiloplasty and palatoplasty. It minimizes the need for secondary rhinoplasty, alleviates tissue tension, reduces scar formation, and aids in preventing maxillary deformities. However, the effectiveness of NAM therapy can be influenced by the patient's age.

Objective: To evaluate the impact of age on the effectiveness of NAM device therapy in pre-surgical orthopedic preparation.

Materials and Methods: A total of 108 patients were treated with the NAM device, with 72 children younger than 4 months and 36 older than 4 months. The cohort comprised 45 children with bilateral cleft lip and palate, 50 with unilateral cleft lip and palate, and 13 with incomplete cleft lip and median cleft palate. Treatment for children under 4 months was phased, beginning with alveolar arch formation over a 3-month period, followed by nasal shaping for 2.5-3 months. For older children, the two phases were combined.

Results: Infants admitted at 10-14 days of age underwent NAM therapy for 4.5-5 months to prepare them for cheiloplasty. Infants admitted at 2-3 months of age were ready for surgery by 6-6.5 months. Achieving optimal results was more difficult in children older than 4 months, particularly in forming the alveolar arch. Children treated before 1 month of age saw the most favorable outcomes, likely linked to glucuronic acid in the infant's bloodstream, which softens bones under the influence of maternal hormones, a condition that diminishes after the first 4 months.

Conclusion: Initiating NAM therapy before the first month of life provides faster and more effective results, suggesting that early intervention is crucial for optimal treatment outcomes in children with cleft lip and palate.

TIME FOR AURICULAR PROSTHESIS

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TO DATE, THE AGE ASPECT OF MICROTIA SURGERY IN CHILDREN IS DIFFERENT. SURGERY BEGINS AT 6-7 YEARS OF AGE AND CONTINUES UNTIL 16-18 YEARS OF AGE. THIS IS THE MAIN CONTINGENT OF PATIENTS, BUT SOME ARE ALSO DONE IN THE LATE PERIOD AFTER 18 YEARS. THE PURPOSE OF THE WORK IS TO FIND OUT IN WHAT PERIOD OF AGE IT IS MORE OPTIMAL TO CARRY OUT AN OPERATION TO FORM THE AURICLE.

FOR THIS STUDY, WE SELECTED CHILDREN WITH MICROTIA WHO UNDERWENT EAR RECONSTRUCTIVE SURGERY. WE OBSERVED 30 PATIENTS AGED 6 TO 17 YEARS (19 BOYS, 11 GIRLS). ALL HAD UNILATERAL MICROTIA. WE DIVIDED INTO 3 GROUPS ACCORDING TO THE FOLLOWING AGE CATEGORIES: 1 GROUP FROM 6 TO 10 YEARS OLD; 2ND GROUP FROM 10 TO 14 AND 3RD GROUP FROM 14 TO 18 YEARS OLD. ALL PATIENTS UNDERWENT AN OPERATION TO RESTORE THE AURICLE ACCORDING TO THE BRENT METHOD IN OUR MODIFICATION.

AFTER THE OPERATION, WE STUDIED THE CONDITION OF PATIENTS OVER THE PAST 3 YEARS AND FOUND THE

following. In the first group, there was a decrease in the size of the auricle by 0.2 - 0.4 mm, possibly associated with the adsorption of the ear framework. In the second and third groups there was a decrease of 0.1-0.2 mm, which is considered a minor change. It should be noted that during surgery, the isolation of the costal cartilaginous part in the third group was difficult due to the onset of the ossification process and a significant loss of elasticity of the rib. This was also reflected in the formation of the auricle frame. In the second group, such changes were not noted.

Thus, we can conclude that a more optimal age for the formation of the auricle is adolescence from 10 to 14 years. At this age, the costal cartilages are still elastic and a decrease in the size of the ear frame in the long term is rarely observed.

PROSTHETIC OUTCOMES IN PAEDIATRIC POPULATION UNDERGOING JAW RECONSTRUCTIONS WITH THE VASCULARIZED FREE FIBULA FLAP- A RETROSPECTIVE CHART REVIEW

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TO ASSESS PROSTHETIC OUTCOMES IN PEDIATRIC POPULATION UNDERGOING JAW RECONSTRUCTION WITH THE VASCULARIZED FREE FIBULA FLAP.

THE STUDY WAS A RETROSPECTIVE CHART REVIEW OF TEN PEDIATRIC PATIENTS (MEDIAN AGE OF 13 YEARS AT THE TIME OF PRIMARY SURGERY), WHO UNDERWENT FFF RECONSTRUCTION FOR MAXILLECTOMY (N=3) OR MANDIBULECTOMY (N=7) DEFECTS. THE PATIENTS UNDERWENT DENTAL IMPLANT PLACEMENT AS A SECONDARY PROCEDURE, AT LEAST 6 MONTHS FROM PRIMARY SURGERY. CLINICAL AND RADIOGRAPHIC RECORDS (OPG/CBCT SCAN) AT THE TIME OF IMPLANT PLACEMENT (T0; N=10) AND AT THE TIME OF PROSTHETIC REHABILITATION (T1; N=9) WERE ASSESSED. LORQV3 AS PROM WAS MEASURED AT T1.

DESCRIPTIVE AND INFERENTIAL STATISTICS WERE APPLIED USING SPSS (VERSION 25.0). $P<0.05$ WAS CONSIDERED STATISTICALLY SIGNIFICANT.

The median follow-up period from T0 was 23.5 months. A total of 37 dental implants were placed, 31 being prosthetically loaded. None of the patients underwent complete hardware removal. Three patients were rehabilitated with fixed prosthesis. Prosthetic complications such as buccal placement of implant-supported prosthesis, improper occlusion, excess vertical cantilever, soft-tissue hyperplasia were noted. At present, all the patients are functionally using their prosthesis, with regular follow-up. Sixty-six percent have reported with food stuck underneath the prosthesis and 44% with ulceration.

Prosthetic rehabilitation of pediatric reconstructed jaws is feasible and predictable, in spite of the challenges associated with it.

CHOICE OF ANESTHESIA METHOD FOR DENTAL IMPLANTATION IN CHILDREN WITH MITRAL STENOSIS

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DEVELOP AN ANESTHESIA OPTION FOR DENTAL IMPLANTATION IN CHILDREN WITH MITRAL STENOSIS. A TOTAL OF 76 CHILDREN AGED 7-14 YEARS WERE EXAMINED. ALL SUBJECTS HAD ATRIOVENTRICULAR STENOSIS OF VARYING SEVERITY OR COMBINED MITRAL VALVE DISEASE WITH PREDOMINANT STENOSIS.THE STUDY WAS BASED ON EXISTING MULTIFACTORIAL SCALES OF THE DEGREE OF PRESERVATION OF CORONARY RESERVES FOR PATIENTS WITH HEART FAILURE, WHICH WERE CALCULATED USING A SIMPLIFIED VERSION OF THE ALGEBRAIC MODEL OF CONSTRUCTIVE LOGIC

THE NUMBER OF YOUNG PEOPLE WITH LOST PERMANENT TEETH IS SIGNIFICANT. ACCORDING TO SOME DATA, THE FREQUENCY OF DENTAL DEFECTS DUE TO PREMATURE REMOVAL OF PERMANENT TEETH IN PEOPLE AGED 13-15 IS 12.7%, AND AT THE AGE OF 15-19 IT REACHES 25%. THE FREQUENCY OF CONGENITAL ADENTIA, EXCLUDING THIRD MOLARS, VARIES FROM 1.5% TO 28.5%. AGAINST THIS BACKGROUND, THE PROBLEM OF THE EFFECTIVENESS OF DENTAL IMPLANTATION IS RELEVANT.

Anesthesia for cleft lip and palate surgery can be highly rewarding yet challenging, especially in neonates with syndromes, difficult airways, or congenital heart disease. While anesthesia for a healthy infant with a simple upper lip defect may be routine, both cases provide immense satisfaction, particularly when parents witness the post-surgical transformation.

The debate around performing cosmetic surgery in the neonatal period centers on anesthesia risks. Some advocate for only emergency surgery due to these higher risks, with the final decision resting on the skill of the surgical and anesthetic team. Both play crucial roles in ensuring patient safety and successful outcomes.

THE SURVIVAL RATES AND RISK FACTORS OF DENTAL PROSTHESES: A RETROSPECTIVE STUDY

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THE PURPOSE OF THIS RETROSPECTIVE CLINICAL STUDY WAS TO ASSESS THE RISK FACTOR OF DECREASING THE SURVIVAL RATE OF MAXILLOFICIAL PROSTHESES.
ELIGIBLE PARTICIPANTS WERE IDENTIFIED BY AN ELECTRONIC HEALTH RECORD REVIEW. PATIENTS WHOSE FIRST VISIT TO THE CLINIC FOR MAXILLOFACIAL PROSTHETICS IN TOKYO MEDICAL AND DENTAL UNIVERSITY HOSIPTAL WAS BETWEEN 1 JAN 2015 AND 31 DEC 2015 WERE SEARCHED IN THE PATIENT RECORD SYSTEM OF THE HOSPITAL. ALL PATIENTS WHO RECEIVED MAXILLOFACIAL PROSTHESES BY THE GENERAL PRACTICE RESIDENTS DURING THIS PERIOD WERE IDENTIFIED. VARIABLES COLLECTED WERE DATE OF DELIVERY OF THE PROSTHESIS, DATE OF THE LAST CONSULTATION, ARCH TREATED (MAXILLA, MANDIBLE), TYPE OF PROSTHESIS (NORMAL PROSTHESIS, MAXILLOFACIAL PROSTHESIS), STATUS OF THE OPPOSING ARCH (IMPLANT-SUPPORTED PROSTHESIS, TEETH AND REMOVABLE PARTIAL DENTURE, COMPLETE DENTURE, NATURAL TEETH), STATUS OF THE PROSTHESES (FRACTURE OR NOT) AND THE MATERIAL OF DENTURE BASE (METAL, ACRYLIC). THE SURVIVAL RATES

OF PROSTHESIS WERE ANALYZED USING KAPLAN?MEIER AND THE ASSOCIATION BETWEEN RISK FACTORS WERE ASSESSED BY COX REGRESSION MODEL. THIS STUDY WAS APPROVED BY THE ETHICS COMMITTEE AT TOKYO MEDICAL AND DENTAL UNIVERSITY (D2016-085).

THE NUMBER OF THE PROSTHESES DELIVERED TO THE SUBJECTS WERE 302. AMONG THEM, 143 WERE FOR THE MAXILLA AND 159 WERE FOR THE MANDIBLE. 203 WERE MAXILLOFACIAL PROSTHESES AND 98 WERE OTHER PROSTHESES. 281 WERE ACRYLIC AND 21 WERE METAL BASED, WHILE 12, 127, 59, AND 104 OPPOSING ARCHES WERE IMPLANT-SUPPORTED PROSTHESES, TEETH AND REMOVABLE PARTIAL DENTURE, COMPLETE DENTURE AND NATURAL TEETH, RESPECTIVELY. DURING A MEDIAN (INTERQUARTILE RANGE) 1.6 (2.2) YEARS OBSERVATION, 111 PROSTHESES OUT OF 302 EXPERIENCED FRACTURES. THE GENERAL SURVIVAL RATE AT 1 YEAR WAS 85.1% AND AT 5 YEAR WAS 47.7%. AMONG ALL THE RISK FACTORS CONSIDERED, ONLY THE ?STATUS OF OPPOSING ARCH? WAS FOUND TO BE A SIGNIFICANT RISK FACTOR FOR PROSTHESIS FRACTURE. IN MULTIVARIABLE ANALYSIS, ALL THREE CATEGORIES (IMPLANT-SUPPORTED PROSTHESIS, TEETH AND REMOVABLE PARTIAL DENTURE, AND NATURAL TEETH) OF THE VARIABLE "STATUS OF OPPOSING ARCH" SHOWED SIGNIFICANT HIGHER EFFECTS ON SURVIVAL TIME COMPARED TO THE REFERENCE CATEGORY "COMPLETE DENTURE." THE HAZARD RATIOS (95% CONFIDENTIAL INTERVAL, P VALUES) FOR THESE CATEGORIES WERE 3.026 (1.075-8.518, P=0.036), 2.395 (1.255-4.572, P=0.008), AND 2.794 (1.356-5.759, P=0.005), RESPECTIVELY.

BASED ON OUR RETROSPECTIVE RISK FACTOR ASSESSENT STUDY, WE CONCLUDED THAT PROSTHESES ARE MORE

Treatment of Temporomandibular Joint Ankylosis in Children (2020-2023)

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Objective of the study: To confirm the diagnosis of temporomandibular joint (TMJ) ankylosis in children, eliminate ankylosis through surgical intervention with the help of an implant, and ensure the restoration of mouth opening and correction of facial asymmetry in children.

Materials and methods: Between 2023 and 2024, three pediatric patients underwent surgery at the National Medical Center for Children with the diagnosis of TMJ ankylosis. The patients were aged 3, 10, and 16 years. The cause of ankylosis in two patients was congenital, while one case was post-traumatic. All patients exhibited unilateral ankylosis, which corresponds with global literature data that indicates over 90% of TMJ ankylosis cases are unilateral. Prior to surgery, a 3D CT scan was conducted, revealing ankylosis where the condyle of the lower jaw was fused with

THE TEMPORAL BONE. BASED ON 3D CT DATA, A CUSTOM MANDIBULAR FOSSA IMPLANT WAS CREATED FOR TWO OF THE PATIENTS. THROUGH A PREAURICULAR INCISION AND INTRAORAL ACCESS, THE CONDYLE AND CORONOID PROCESS OF THE LOWER JAW, ALONG WITH THE MANDIBULAR FOSSA OF THE TEMPORAL BONE, WERE RELEASED FROM THE SURROUNDING SOFT TISSUES. ACCORDING TO THE 3D GUIDE, A RESECTION OF THE CONDYLE WAS PERFORMED, AND THE ANKYLOTIC TISSUE WAS SEPARATED FROM HEALTHY TISSUE USING ELEVATORS AND CHISELS. THE 3D-PRINTED IMPLANT WAS FIXED IN PLACE OF THE MANDIBULAR FOSSA WITH THREE SCREWS, FULLY RESTORING LOWER JAW MOVEMENT.

RESULTS: IN BOTH CASES, COMPLETE RESTORATION OF FREE MOVEMENT OF THE LOWER JAW WAS ACHIEVED, RESOLVING THE PATIENTS DIFFICULTIES WITH EATING AND CHEWING.

CONCLUSION: IN PATIENTS WITH TMJ ANKYLOSIS, A TWO-STAGE SURGERY IS RECOMMENDED. THE FIRST STAGE INVOLVES ELIMINATING THE ANKYLOSIS AND IMPLANTING A MANDIBULAR FOSSA, WHICH PREVENTS RECURRENT ANKYLOSIS. THE SECOND STAGE, PLANNED AFTER THE PATIENT REACHES 17 YEARS OF AGE, INVOLVES DESIGNING AND PLACING A CUSTOM TITANIUM IMPLANT FOR THE CONDYLE.

Beyond Microrough surfaces: The Nano-in-Micro Hybrid Revolution in Implant Surface Engineering

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Osseointegration in maxillofacial implants is often compromised by anatomical limitations of host bone, as well as the complications by chemotherapy and radiation. While current micro-roughened implant surfaces accelerate bone formation by enhancing osteoblast differentiation compared to older machined surfaces, they exhibit limitations in osteoblast recruitment and proliferation. This study aims to explore whether incorporating nanostructures into micro-roughened titanium surfaces can not only enhance osteoblast attachment and proliferation but also sustain their superior differentiation capabilities.

Micro-rough titanium surfaces were prepared by acid etching grade 2 titanium disks. Nanostructures were added onto the microrough surfaces using a proprietary protocol to create micro-nano hybrid surfaces. Surface morphology was analyzed using scanning electron microscopy (SEM) and 3D surface profiler. Rat femur bone marrow-derived osteoblasts were cultured on these titanium disks.

Cell attachment and proliferation were quantified using the WST-1 assay. Osteoblastic differentiation was assessed using Alizarin Red staining to measure mineralization. Intracellular oxidative stress, which can impair cell function, was assessed by measuring levels of reactive oxygen species (ROS).

SEM imaging revealed a successful integration of polymorphic nanostructures including nano-ridges, nano-nodules, and nano-compartments into the micro-rough surfaces, while maintaining the distinctive micro-pitted morphology. Notably, the hybrid surface exhibited rounded, soft-edged micro-peaks. Surface analysis indicated that the hybrid surface had 1.1 times greater average roughness (Sa), surface area (Sdr), and peak density (Spd) compared to control micro-rough surfaces. The mean curvature of peaks (Spc) was reduced on the hybrid surface by 7%, confirming the soft-edged architecture. Osteoblast attachment on hybrid surfaces increased by 20%, and proliferation was 60% higher compared to micro-rough surfaces. Additionally, mineralized nodule formation was enhanced by 40%, while ROS levels were reduced by 40%, indicating diminished cellular stress on the hybrid surfaces.

This study demonstrates the successful incorporation of polymorphic nanostructures into micro-rough titanium surfaces, creating a micro-in-nano hybrid topography that significantly enhances osteoblast attachment, proliferation, and

DIFFERENTIATION. THE HYBRID SURFACE OVERCOMES THE INHERENT LIMITATIONS OF CURRENT MICRO-ROUGH TITANIUM IMPLANTS, MARKING A SIGNIFICANT ADVANCEMENT IN OSSEOINTEGRATION TECHNOLOGIES. THESE FINDINGS HOLD PROMISE FOR TRANSFORMING THE FUTURE OF IMPLANTOLOGY BY EXTENDING THE BOUNDARIES OF IMPLANT SURFACE ENGINEERING.

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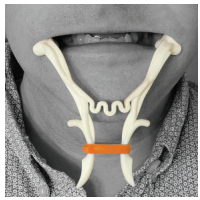

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