Defense Health Agency (DHA) Clinical Communities Speaker Series

OCT 2023 CCSS: Collaborative Best Practices in Military Health Care

S02: Maxillofacial Prosthodontics and Speech-Language Pathologist Collaboration

Resource List

The American Academy of Maxillofacial Prosthetics (2023) has a concise definition of this essential subspecialty of Prosthodontics. Maxillofacial Prosthodontics involves the rehabilitation of patients with defects or disabilities that were present when an individual was born or developed due to disease or trauma. Protheses are often needed to replace missing areas of bone or tissue and restore oral functions such as swallowing, speech, and chewing. The patients seen by a Maxillofacial Prosthodontist typically have been in an accident, have had surgical removal of diseased tissues, or have a neuromuscular disorder from ALS or a stroke. Pediatric patients may see a Maxillofacial Prosthodontist if they were born without full development of ears, teeth, or palate and need specialized care.

The article Maxillofacial Prosthetic rehabilitation of patients with resection of squamous cell carcinoma: A report of two cases (2020) reviews two cases to describe in detail the technical sequence of maxillofacial prosthesis fabrication. Maxillofacial prosthetic rehabilitation is frequently indicated after surgical treatment of individuals with oral cavity and pharynx cancers. This article delves into a detailed review of the process through the lens of two cases, one involving a 56-year-old female who had a pharyngeal obturator prosthesis after a partial maxillectomy, including soft palate, tonsil, oropharynx, and retromolar space regions. The second case is an 83-year-old man who was rehabilitator with hard palatal obturator prosthesis after a maxillectomy, including hard palate and nasal floor. The commonalities between the two cases included complaints of oronasal regurgitation and difficulty in chewing, swallowing, and speaking.

Maxillofacial Prosthodontics must demonstrate continual growth when considering the broad multidisciplinary care provided by the subspecialty for congenital and acquired conditions. Several factors are transforming multidisciplinary head and neck care, including the adoption of advanced digital technologies that are evolving and converging at an accelerated and unprecedented rate. In the article The future of maxillofacial prosthodontics in North America: Part I-Journey to the present (2022) the authors note three distinct periods of growth including formation, consolidation, and innovation. It also raises the question of how maxillofacial prosthodontics is prepared to contribute to the increasingly advanced digital technologist-driven multidisciplinary head and neck care team of the future.

Maxillofacial Prosthodontists would engage in the care of patients who have suffered burns. The treatment for such an individual continues to advance and requires a comprehensive interdisciplinary team. With advances in medical sciences, mortality has declined for patients with large total body surface area burns, and this has resulted in the need for more hands-on clinical judgment and skill from the speech-language pathologist working with burn survivors. The article Speech-Language Pathology's role in management of orofacial contractures after a facial burn (2022) discusses how patients with a facial burn injury pose a special challenge for intervention by the speech-language pathologist. This population calls upon the therapist to be able to assess and treat the limiting effects of orofacial scarring and contractures, as well as speech, language, voice, cognitive, and swallowing disorders. Traditionally, occupational and physical therapists have managed orofacial contractures in this population with methods such as pressure garments, silicone masks, and oral splints. Research and data on cutaneous functional units have shown that occupational and physical therapists require significant time to address the whole body needs of the burn care patient, calling for increased involvement from all professionals especially in larger total body surface area burns. Microstomia and orofacial contractures are a treatment need for the facial burn population and present a collaborative treatment opportunity for the speech-language pathologist

References

American Academy of Maxillofacial Prosthetics. (2023). *What is a Maxillofacial Prosthodontist?* https://www.maxillofacialprosthetics.org/referring_physicians/what_is_mp/

Arantes, D. C., Rodrigues, R. A. A., de Arruda, J. A. A., de Magalhães, C. S., Mesquita, R. A., Goyatá, F. D. R., Moreira, A. N., & Moreno, A. (2020). Maxillofacial Prosthetic rehabilitation of patients with resection of squamous cell carcinoma: A report of two cases. *Contemporary clinical dentistry*, 11(3), 294–297. https://doi.org/10.4103/ccd.ccd_320_19

Arguello, L.A. & Kerr, K.M. (2022). Speech-Language Pathology's role in management of orofacial contractures after a facial burn. *Perspectives of the ASHA Special Interest Groups*, 7, 1514-1519. https://pubs.asha.org/doi/epdf/10.1044/2022_PERSP-21-00337

Wolfaardt, J.F., Brecht, L.E., Taft, R.M. (2022). The future of maxillofacial prosthodontics in North America: Part I—Journey to the present. *The Journal of Prosthetic Dentistry*, 127(2), 345-350. https://doi.org/10.1016/j.prosdent.2020.11.012