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Neutral Zone and Copy Denture Techniques in a Geriatric Patient

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ABSTRACT

Severe alveolar ridge resorption is a key problematic feature in the fabrication of full dentures. The instability and looseness of a lower full denture are among the most prevalent issues observed in an edentulous patient. Complete dentures are mechanical devices. Functionally, they must be fashioned in harmony with normal neuromuscular function in oral cavity. This report describes the treatment of a 72-year-old female who came with a complaint of an unstable, loose lower denture due to a severely resorbed mandibular residual ridge. Medically, the patient presented with multiple systemic diseases with various medications taken. Clinical examination showed that the mandibular ridge was flat with insufficient width and height. Treatment consisted of maxillary and mandibular dentures construction utilizing the neutral zone technique. At one year review, the patient expressed her satisfaction with her existing dentures and requested to have similar dentures made as a spare in case she ever lost the current dentures due to her old age condition. Hence, she was offered a copy denture. The neutral zone technique is a physiological and functional strategy to manage unstable lower full denture cases by determining optimal teeth positioning in relation to neuromuscular activities as well as the shape of the polished surface of the denture. On the other hand, copy denture increases neuromuscular adaptation to new denture, minimizes patient-clinician chairside time, decreases laboratory processes, reduces the number of patient visits, simplifies jaw relation registration and offers greater guidance to tooth position. Overall, the patient was satisfied with the results. Combination of neutral zone technique in elderly patient and subsequently, copy denture provision at a later stage proved to be a successful treatment modality in elderly patient.

Keywords: complete denture, atrophic ridge, neutral zone, copy denture