

A Modified Surgical Technique for Inferior Alveolar Nerve Repositioning on Severely Atrophic Mandibles: Case Series of 11 Consecutive Surgical Procedures

H.M. Barbu^{1,2}, L. Levin³, M.B. Bucur^{4,5}, R.M. Comaneanu⁶, A. Lorean^{7,8}

¹Department of Oral Implantology, Faculty of Dentistry, "Titu Maiorescu" University, Bucharest, Romania

²"Victor Babeş" General Hospital, Bucharest, Romania

³Department of Periodontology, School of Graduate Dentistry, Rambam Health Care Campus, and Faculty of Medicine, Technion, IIT, Haifa, Israel

⁴Faculty of Dentistry, "Carol Davila" University, Bucharest, Romania

⁵Private Practice, Dentimplant, Bucharest, Romania

⁶Department of Radiology, Faculty of Dentistry, "Titu Maiorescu" University, Bucharest, Romania

⁷Laniado Hospital, Netanya, Israel

⁸Department of Oral Implantology, Faculty of Dentistry, "Titu Maiorescu" University, Bucharest, Romania

Abstract

Background: To emphasize the characteristics and possible pitfalls of nerve reposition in cases of severe bone resorption in the posterior mandibular area, and to modify hard- and soft-tissue manipulation accordingly.

Methods: We analyzed retrospectively, 7 patients in which we performed full arch lower jaw rehabilitation. The patients presented for oral rehabilitation having a minimal residual bone above the mandibular canal and had undergone inferior alveolar nerve (IAN) displacement with modified surgical technique for fixed prosthetic rehabilitation.

Results: Eleven procedures of nerve repositioning were performed on severely atrophic mandibles. The average age of the patients was 43.29 years (12.37 SD). Residual bone above the mental foramen ranged between 0.5 mm and 1.5 mm, with an average of 0.93 mm (0.35 SD). In total, 32 dental implants were inserted into the area simultaneously with nerve displacement. The average follow-up time was 35.71 months (41.75 SD), ranging between 7 and 120 months.

Conclusions: Severe atrophic cases require special attention due to the loss of keratinized tissue around the crestal area. The use of a modified surgical approach and specific surgical instruments provides a safer working environment for the operator and ensures optimal results.

Key words: inferior alveolar nerve repositioning, dental implants, resorbed mandibles, residual bone, mental foramen

Corresponding author: Raluca Monica Comaneanu, MD

Gheorghe Petrascu 67A, Bucharest, Romania

E-mail: monica.tarcolea@gmail.com