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Case Series

Use of Resorbable Membrane in Combination with Bone Grafts

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Abstract

The aim of this study is to report our experience with the collagen membrane through its use in 25 cases in recent years and also to present our series of articles published in recent years using this product.

Alveolar bone resorption is a constant post-extraction alteration. This is because the alveolar process has the function of supporting the teeth and, once this function is lost, it tends to be gradually resorbed [1-4]. This process of resorption constantly culminates in bone defects regarding height, thickness, or associated aspects, and they often preclude installation of dental implants, making it necessary to perform a bone graft first.

The sample included 25 patients, 14 female and 11 male, with an average age of 48 years (range 25-65 years), who sought treatment with a view to installing dental implants and after clinical and tomographic assessment were found to require bone augmentation.

The phenomenon of soft-tissue invagination into the reconstruction site occurs because this tissue has a healing process piloted by fibroblasts, which are cells that have rapid and considerable proliferation capacity, whereas bone tissue incorporation is dependent on osteoblasts, whose proliferation process occurs more slowly. When the grafts in which the Lumina Coat membrane was used were reopened, they were found to be in an advanced state of incorporation, ensuring secure implant insertion.

The use of the Lumina Coat membrane proved to be viable and predictable in optimizing surgical outcomes, with low rates of complications and excellent clinical safety, and its use by clinical professionals is highly recommended.

Keywords: Collagen Membrane; Celullar Exclusion; Bone Grafts

Introduction

Alveolar bone resorption is a constant post-extraction alteration. This is because the alveolar process has the function of supporting the teeth and, once this function is lost, it tends to be gradually resorbed [1-4]. This process of resorption constantly culminates in bone defects regarding height, thickness, or associated aspects, and they often preclude installation of dental implants, making it necessary to perform a bone graft first [4-8].

It is known that the treatment of bone defects remains a major challenge to the surgeons even today [9-12]. The exposure rate, as well as the difficulty delivering nutrients to block or particulate bone grafts, when performed on the alveolar ridge in areas with bone defects, are the main factors reported in the literature to directly and negatively influence reconstruction outcomes [12-16].

In order to optimize these outcomes, the use of resorbable membranes has been reported in the literature as an option with this capacity. Studies indicate that their use reduces graft resorption due to their ability to protect the operated area, but that their main ability is to prevent soft-tissue invagination into the reconstruction site [15-20].

According to these studies, the phenomenon of soft-tissue invagination into the reconstruction site occurs because this tissue has a healing process piloted by fibroblasts, which are cells that have rapid and considerable proliferation capacity, whereas bone tissue incorporation is dependent on osteoblasts, whose proliferation process occurs more slowly [15-25].