“Effectiveness of EPX Biomolecules in Managing Complications during Membrane Exposure and Promoting Soft Tissue Healing” A Case Study

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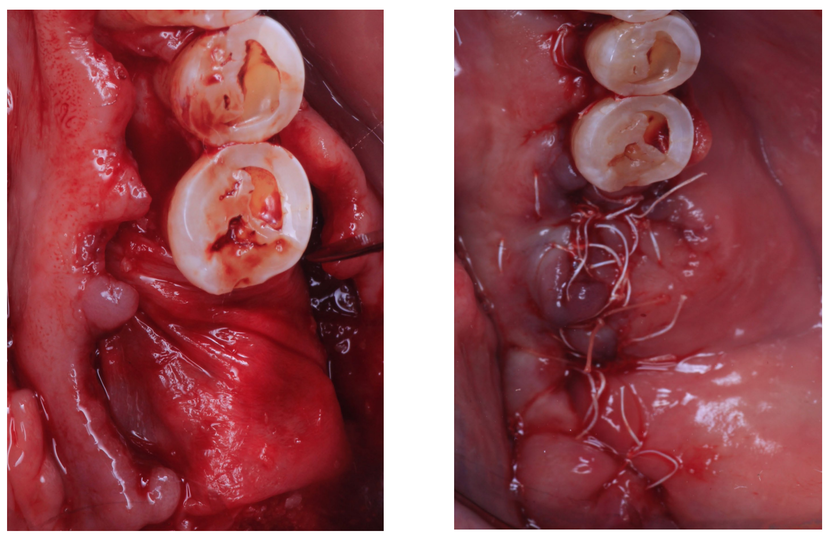
INTRODUCTION

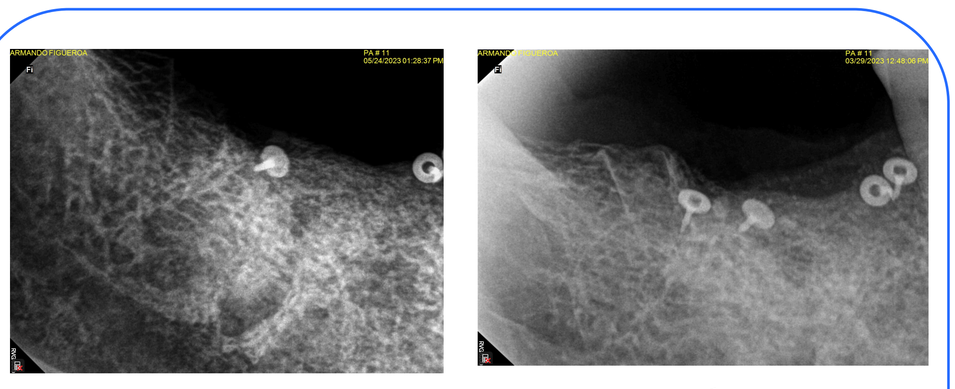
Guided bone regeneration consists of a surgical procedure with the purpose of increasing bone volume using a membrane as a barrier, biological materials and bone grafts. The most frequent complication after the procedure is the exposure of absorbable and non-absorbable membranes.The biomolecule named EPX is composed of chitosan, thymol, colloidal silver and colloidal copper that form a nanomolecule. This nanomolecule in a hydrogel presentation is capable of accelerating the healing process, creating an adequate structure for cell growth, promoting cell proliferation and neovascularization. This molecule has unique properties such as biodegradability, antimicrobial properties, non-toxicity, and versatility.

EPX Biomolecule’s Properties

- ✓Promotes cell growth
- ✓Biodegradibility
- ✓Antimicrobial properties
- ✓Reduces inflammatory reactions
- ✓Accelerate healing



Horizontal guided bone regeneration



15 days radiographic control

30 days radiographic control

METHODS & MATERIAL

A 63-year-old male patient attended the postgraduate program of Periodontics at the Universidad Autónoma de Baja California, campus Mexicali with the aim of performing a periodontal evaluation, classifying him as ASA I. Horizontal guided bone regeneration was performed in the area of 30 and 31. Long-term absorbable pericardial membrane and allograft were used. At 7 days, an exposure of the membrane was observed. The management of the membrane exposure involved weekly cleaning, followed by the application of EPX biomolecule in gel. Additionally, the patient used EPX biomolecule in mouthwash twice daily for two weeks. The patient was monitored at 8, 15 and 30 days post-surgery to document reepithelialization changes.

Management of membrane exposure with EPX Biomolecule

7 days **15 days** **30 days**

RESULTS

Following the exposure of the membrane and the application of EPX biomolecules, complete healing of the gingival tissues was achieved within one month.

OBJECTIVE

To evaluate the management of complications during membrane exposure using EPX biomolecules and assess their impact on the healing process of soft tissues.

CONCLUSION

The utilization of EPX biomolecules emerges as a compelling and successful strategy for postoperative care following resorbable membrane exposure. This approach facilitates an adequate healing of gingival tissues, characterized by an absence of infection or inflammation indicators.

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