

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

## USE OF PERIO KIN HIALURONIC 1% FOR TREATMENT OF PERIIMPLANTARY SOFT TISSUE NECROSIS AFTER USE OF PTFE-d MEMBRANE FOR ALVEOLAR PRESERVATION

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## Abstract

This clinical case demonstrates the use of PERIOKIN HIALURONIC 1% gel for the effective treatment of soft tissue necrosis, which prevented the premature loss of dental implants and helped in the regeneration and maturation of peri-implant tissues, ending the treatment with successful prosthetic rehabilitations.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

## Introduction

The use of PTFE-d membranes for the preservation of the alveolar site is widely used and is indicated to maintain the volume of bone tissue and gain keratinized gingiva at the surgical site as it promotes wound healing by second intention, thus preserving the hard and soft structures.

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2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

## Anamnesis

59 year old male patient comes to the clinic for a routine dental check-up, he is a non-smoker and does not consume alcoholic beverages, apparently healthy.

A routine check-up was performed and the presence of multiple generalized gingival recessions was observed in both the upper and lower arches, there were also deteriorated dental restorations, crowns without cervical sealing and some root debris. We requested a panoramic radiographic study, we found radiolucent shadows at apical level in the piece 1.6 and 2.6 related to infection processes, we indicated to the patient the realization of root canal treatment in the piece 1.6 and extraction of the piece 2.6 but patient does not accept the root canal treatment for bad experiences related to this treatment so we opted for the dental extraction of both pieces and subsequent installation of dental implants.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY



FIGURE 1. Initial situation, patient comes to the office for a general check-up, multiple complications are observed such as gingival recession, pigmentation, dental calculus accumulation, root debris, resin restorations and crowns with recurrences.



FIGURE 2. Upper occlusal image showing tooth 1.6 with excess cement and absence of restoration and tooth 2.6 with metal-plastic crown restoration.

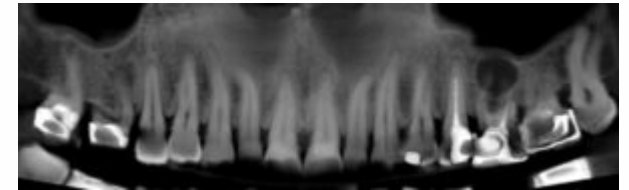


FIGURE 3. Radiographic and tomographic study of the upper arch to obtain an accurate diagnosis of the teeth 1.6 and 2.6.

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2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

## Treatment plan

### GENERAL TREATMENT PLAN

#### A) TREATMENT BEFORE COMPLICATION

Dental tomography

2. Extraction of teeth 1.6 and 2.6.

3. Curettage and lavage of the dental alveoli.

4. Alveolar preservation due to the proximity to the maxillary sinuses, with PTFE-d membranes and bone xenograft.

5. Square X sutures.

6. Removal of membrane and stitches in 21 days.

7. Control tomography 8 months after surgery.

8. Planning and surgery of dental implants.

#### B) TREATMENT OF PERI-IMPLANT SUPRACRESTAL SOFT TISSUE NECROSIS COMPLICATION

9. Daily application of PERIOKIN HIALURONIC 1% gel, (KIN-Spain) for 10 days as follows and use of GINGIVAL COMPLEX rinse (KIN-Spain) daily.

#### C) POST COMPLICATION

10. Installation of Customized Scars.

11. Taking impressions.

12. Confection of lithium disilicate crowns with ceramic transmucosal, screwed.

13. Control of 2 years postoperative.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY



FIGURE 5 and 6. Dental pieces 1.6 and 2.6 were extracted, a thorough washing and curettage of the dental alveoli was performed, alveolar preservation with Lumina Bone Xenograft and PTEF-d membrane (CRITERIA-BRASIL) was performed. The patient returned 21 days later for the removal of sutures and PTFE-d membranes, the patient indicated that the PTFE-d membrane of the piece 1.6 was removed one day before the consultation.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY



FIGURE 6 and 7. The PTFE-d membranes and nylon sutures were removed, the wounds of both alveoli are in the process of healing, this repair will be made by second intention with which we will obtain a gain of keratinized tissue in the supracrestal direction. Daily dental hygiene is recommended to the patient together with the use of GINGIVAL COMPLEX mouthwash (KIN-SPAIN).

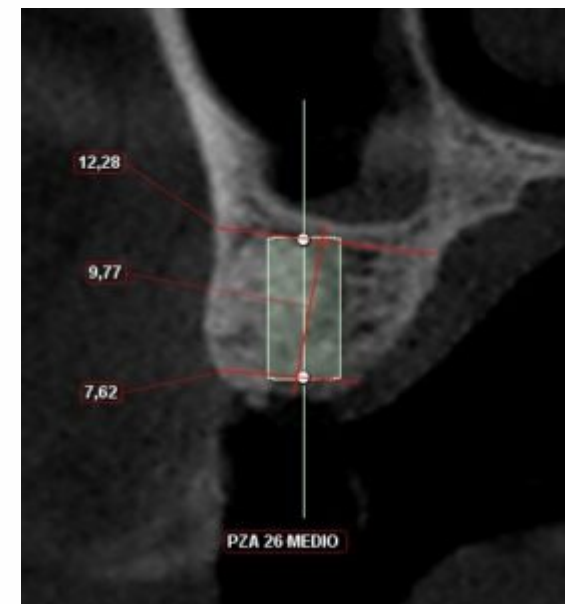
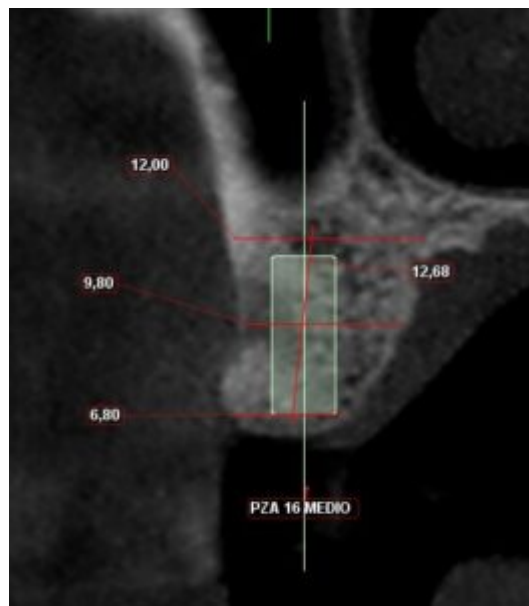


FIGURE 8 and 9. Virtual planning of the insertion of dental implants in zones 1.6 and 2.6 is carried out in order to obtain the appropriate measurements, so as not to damage anatomical structures such as the maxillary sinuses and, of course, to obtain a correct 3D position of the dental implants.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

## Carrying out the treatment

TREATMENT OF PERI IMPLANTARY SOFT TISSUE NECROSIS AFTER USE OF PTFE-d MEMBRANE FOR ALVEOLAR PRESERVATION (the treatment will be accompanied by sequential images to better show the evolution of the treatment). Treatment is planned based on the application of PERIOKIN HIALURONIC 1% gel (KIN-SPAIN) for 10 days as follows: one application of PERIOKIN HIALURONIC 1% gel in the office in the morning after disinfection of the wounds with 0.12% Chlorhexidine.

Two applications of the gel on an outpatient basis at home after a complete dental cleaning and use of the mouthwash GINGIVAL COMPLEX (KIN- SPAIN) in order to reduce the amount of bacteria and stimulate the healing of wounds properly thanks to the regenerative properties of Hyaluronic Acid.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY



FIGURE 10 and 11. Postoperative control after 5 days, we observe the absence of sutures, the supra crestal scar tissue is ischemic and with a possible diagnosis of necrosis, we also observe the exposure of the 1.6 implant closure cap, there is no pain.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY



FIGURE 12 and 13. Day 1 of treatment. Treatment is planned based on the application of PERIOKIN HIALURONIC 1% gel (KIN-SPAIN) for 10 days as follows: one application of PERIOKIN HIALURONIC 1% gel in the office in the mornings after disinfection of the wounds with 0.12% Chlorhexidine and two applications of the gel on an outpatient basis at home after complete dental hygiene and use of GINGIVAL COMPLEX mouthwash (KIN-SPAIN) in order to reduce the amount of



FIGURE 14 and 15 and 31. Day 2 of treatment, a process of repair and maturation of the tissues begins, caused by wound healing by second intention.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY



FIGURE 16 and 17. Application of PERIOKIN HIALURONIC 1% gel in the office in the scarring areas, after disinfection with 0.12% Chlorohydrin.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY



FIGURE 18 and 19. Day 3 of treatment. The soft tissues continue their repair.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

## Follow up

Since the beginning of the application of PERIOKIN HIALURONIC 1% gel we observed a remarkable improvement of the supracrestal tissues that were necrotic, this improvement was significant as the days progressed since the use of the gel was performed every day.

The fact of performing daily applications in the office allowed us to observe the evolution of the healing and thus ensure that the application of the gel was carried out in an adequate and constant manner.

After applying PERIOKIN HIALURONIC 1% gel for 10 consecutive days, we observed an improvement in the quality of the supracrestal soft tissues, both in terms of healing and quality.

At 90 days the supracrestal soft tissue that was necrotic is fully repaired, completely healed and the health of the dental implants is stable.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

## Discussion

Soft tissue necrosis after the use of PTFE-d membranes or after the insertion of dental implants occurs very infrequently, so its origin can generally be associated to multiple factors, either due to the patient's state of health or to predisposing factors or surgical site history.

Among these factors or antecedents we can indicate:

1. The quality of the soft tissues related to their thickness and volume.
2. The quality of the bone tissues.
3. Presence or absence of dental infections.
4. Whether the surgical site was regenerated or any previous treatment was performed.

The factors that predispose to this complication can be varied, the review of the literature shows a low or almost null incidence, which does not mean that this cannot happen and the dental professional must be prepared to resolve this complication.

Chlorhexidine Digluconate 0.20% and Hyaluronic Acid 1% has properties that strengthens, tones and visibly improves . -It moisturizes in depth and provides elasticity to the oral mucosa, providing an immediate sensation of comfort favoring the reduction of dental biofilm, we can consider it as a quite adequate option for the treatment of soft tissue necrosis due to the results offered in this clinical case.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

## Conclusion

The result obtained in this clinical case with the application of PERIOKIN HIALURONIC 1% gel showed a successful result during the whole treatment not only for the benefit of the soft tissues but also for the health of the bone tissues and the stability of the dental implants, thus contributing to their stability and durability in time, avoiding future mucositis and peri-implantitis.

The collaboration of the patient was also a fundamental factor to obtain a successful result, since the application of the gel was daily and several times a day, his support and discipline was very important.

We successfully concluded this clinical case and currently the treatment has a 2-year follow-up, not only clinical but also radiographic follow-up.

# KIN INTERNATIONAL AWARDS

2<sup>ND</sup> INTERNATIONAL COMPETITION OF CLINICAL CASES IN PERIODONTOLOGY AND SURGERY

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