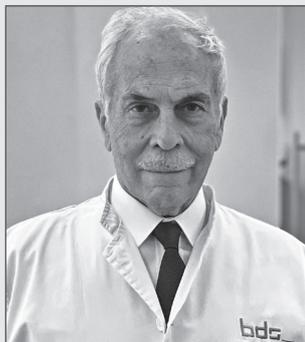


OXYSAFE® - In clinical application

Case report by Prof. Geroges Tawil

Author: Prof. Georges Tawil Professor Emeritus St Joseph University Beirut



Prof. Geroges Tawil

- Born in 1949 in Lebanon
- 1967 – 1972: D.D.S. St Joseph University Beirut
- 1972 – 1975: Postgraduate studies at University of Paris VI in periodontology and oral surgery
- 1975 – 1977: Teaching Associate University of Pennsylvania USA
- 1980: Obtained his doctorate degree D.Od.Sc from Paris University
- 1977 – 2015: Professor at St Joseph University, department of periodontology
- And to current date: Private practice Beirut Dental Specialists Clinic

Peri-implantitis is the main cause of implant loss whether in the early period following implant placement or several years after successful implant osseointegration. Over the past twenty years, a wide variety of chemotherapeutic agents were developed to prevent or treat peri-implantitis. Chlorhexidine, H₂O₂, citric acid, EDTA, antibiotics, Iodine were tested in various clinical and experimental studies. None of these chemicals proved to be fully effective in eliminating the bacterial biofilm that colonizes the pores and roughness of the contaminated implant surface.

Furthermore, other scientific publications suggested that agents leave residues on the implant surface or alter the implant surface and ultimately compromise the cellular response during healing.

In the following case report, we used OXYSAFE gel, an oxygen-releasing complex which kills oral bacteria and is effective primarily against gram-anaerobes.

OXYSAFE is based on a patented oxygen technology that releases active oxygen on the area to be treated. It is a hydrocarbon oxoborate complex that becomes activated when in contact with the mucosal membrane in combination with saliva. This complex acts as a matrix that releases the active oxygen.

In this protocol, an open flap is done on the affected area followed by a thorough curettage of the inflamed tissues. The area is sprayed with sterile water. OXYSAFE gel is applied for 5 min on the contaminated implant surface. The area is then washed with NaCl and H₂O₂ 10 vol solutions. A second 5 min application of OXYSAFE gel is done. The area is rinsed with sterile water. The peri-implant bone defect is then gently packed with a bone substitute and covered with a collagen fleece. The flap is then coronally sutured.

Case Report

We treated a patient at our office who complained of pain caused by an abscess formation in implant region 12. The implant was placed one-year earlier by his general dentist. Clinical and radiographic examination revealed inflammation with swelling of the soft tissues and pus exudation on pressure. Pocket measured 5 - 6 mm and peri-implant bone loss was 3 mm.

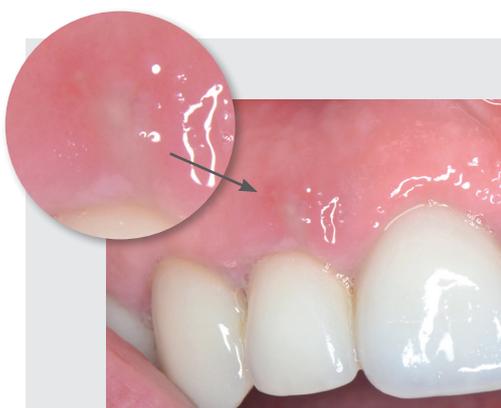


Fig 1 Abscess on implant placed in site 12 with fistula formation

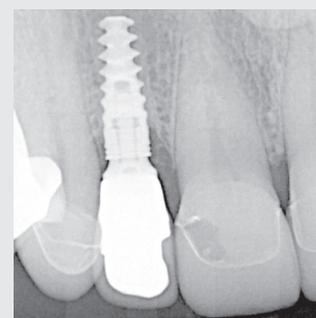


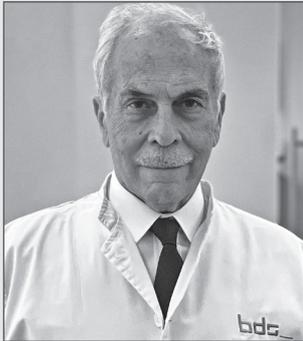
Fig 2 X-ray of the implant site, note the 3 mm bony defect



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Fig 3 Exposure of inflamed tissues following flap elevation



Fig 4 Palatal view of the defect



Fig 5 Buccal view of peri-implant defect following curettage



Fig 6 Application of OXYSAFE gel

The diagnosis of peri-implantitis was done and treatment recommended. We decided to approach the case surgically, to eliminate the infection and treat the peri-implant defect. A mini-flap was elevated buccally and palatally including the two adjacent teeth. The inflamed tissues were curetted. A 3 mm horizontal defect with more severe bone loss on the buccal side was observed. Two consecutive 5 mn applications of OXYSAFE gel was done per the protocol described earlier. The defect was gently filled with a xenograft, covered with a collagen fleece. The flap was then coronally sutured using interrupted sutures. The patient was given an antibiotic coverage for five days (Augmentin 1 gr bid), pain killers as needed (Ibuprofen 600 mg) and OXYSAFE mouthwash for two weeks. Sutures were removed ten days later. The patient complained of mild pain post-operatively that was well controlled with the pain killer prescribed. The patient was seen seven weeks later for control. The wound was healing with no complications. However, the mesial and distal papillae were still absent. The patient was advised to continue using OXYSAFE mouth rinse for another month. A further follow-up at six month showed excellent healing of the soft and hard tissues and a nice regeneration of the adjacent papillae.



Fig 7 Soft tissue healing at 7 weeks



Fig 8 Situation after 6 months

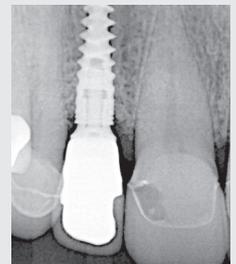


Fig 9 Radiological check after 6 months



OXYSAFE Intro Kit, 3 x 1 ml Gel REF 155 040
3 x 250 ml liquid + 3 x application canulas

OXYSAFE Gel, 3 syringes à 1 ml REF 155 041
OXYSAFE Liquid, 250 ml REF 155 042

