

TOPICAL DESICCANT AGENT IN ASSOCIATION WITH MANUAL DEBRIDEMENT IN THE INITIAL TREATMENT OF PERI-IMPLANT MUCOSITIS: A CLINICAL PROSPECTIVE STUDY

G. Lombardo<sup>1</sup>, C. Signoretto<sup>1</sup>, A. Pardo<sup>1</sup>, G. Corrocher<sup>1</sup>, J. Pighi<sup>1</sup>, A. Signoriello<sup>1</sup>, P. F. Nocini<sup>1</sup>

<sup>1</sup> Department of Surgery, Dentistry, Paediatrics and Gynaecology, Section of Dentistry and Maxillo-facial Surgery, University of Verona, Verona, Italy

Background & Aim

Limited data exist regarding the treatment of peri-implant mucositis and current treatment protocols for this condition are still unpredictable [1]. The aim of this randomized study was to evaluate the clinical effects of the adjunctive administration of a locally delivered desiccant liquid with molecular hygroscopic properties (HYBENX® Oral Tissue decontaminant™; HBX) in association with manual scaling and root planning (SRP) in the treatment of peri-implant mucositis.

Methods

12 patients presenting at least one implant with a probing depth (PPD) ≥4 mm combined with bleeding and/or exudate on probing, were included in the study. At baseline (T0) subjects were randomly assigned to: the Test group SRP+HBX (6 subjects and 16 implants), which received local administration of HBX before SRP; or to the Control group SRP+CHX (6 subjects and 14 implants), which received Chlorhexidine Digluconate Corsodyl TM Dental Gel 1% (CHX) after debridement.

Treatment was repeated after 2 and 4 weeks (T1 and T2). Follow-up examinations were conducted at 3 months (T3). Visible plaque index (VPI), modified plaque index (mPLI), bleeding on probing (BOP), modified bleeding index (mBI) and peri-implant probing depths (PPD) were clinically detected to estimate soft tissues conditions. mBI reduction was the main outcome.

Results

Between T0 and T3 examinations, both groups presented a statistically significant reduction in m-BI: 1,63±1.02 for the Test group; 1,29±1,20 for the Control group. Furthermore, the SRP+HBX group showed a significantly (p<0.05) greater PPD reduction (concerning the deepest PPD site), compared to SRP+CHX group. Despite an increased percentage of sites showing a complete disease resolution (9/16 sites BOP+, 56%, in the Test group; 6/14 sites BOP+, 43% in the Control group), comparisons failed to demonstrate statistically significant differences among groups. Better performances in microbiological analysis were revealed by SRP+CHX group, which exhibited a validated and targeted effect on anaerobic bacteria.

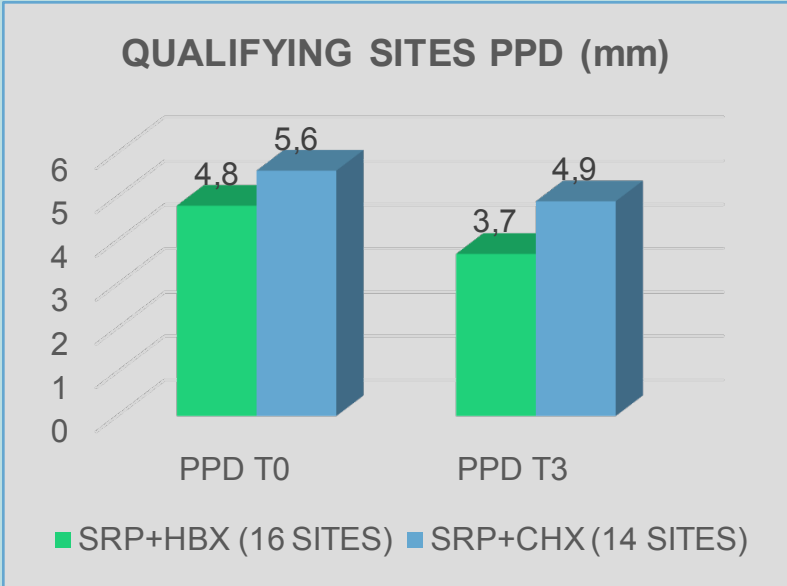
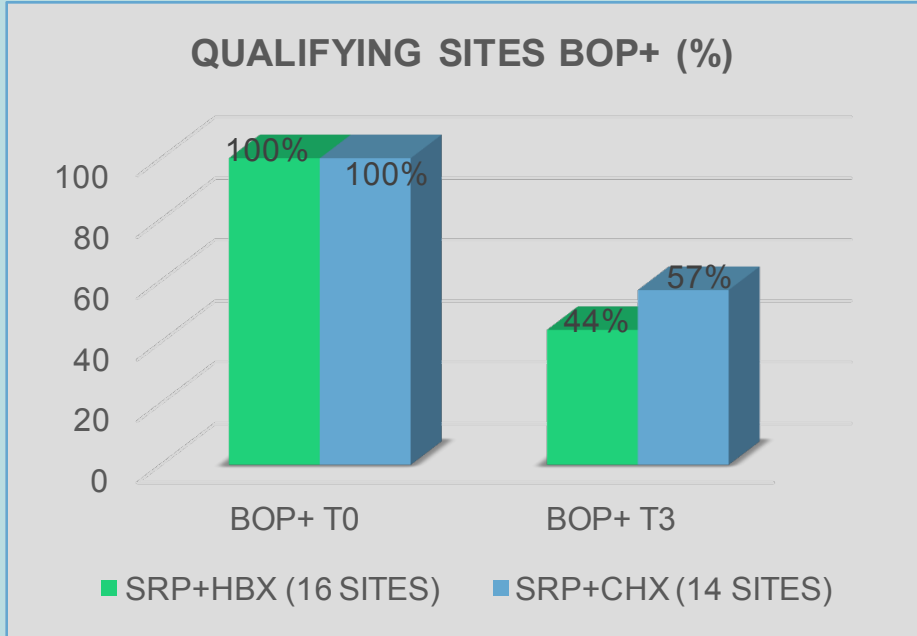
Discussion and Conclusion

Similarly to other studies concerning different agents [2,3], both groups were effective in reducing inflammatory signs on the short term, but failed to achieve a

complete disease resolution. Greater results were found in T-HBX group, with a statistically significant difference in PPD. On the contrary, T-CHX group revealed superior microbiological outcomes, especially among anaerobic bacteria.



Anaerobic bacterial count	SRP+HBX (16 sites)	SRP+CHX (14 sites)
T0	9.40E+06	4.51E+05
T3	1.40E+06	1.23E+05



References

[1] Renvert, S., Roos-Jansaker, A. M. & Claffey, N.(2008). Non-surgical treatment of peri-implantmucositis and peri-implantitis: a literature review. Journal of Clinical Periodontology. 35(8):305–315; [2] Renvert, S., Lessem, J., Dahlen, G., Renvert, H., & Lindahl, C. (2008). Mechanical and Repeated Antimicrobial Therapy Using a Local Drug Delivery System in the Treatment of Peri-Implantitis: A Randomized Clinical Trial. Journal of Periodontology. 79(5):836-44. [3] Lombardo, G., Signoretto, C., Corrocher, G., Pardo, A., Pighi, J., Rovera, A., Cacauri, F. & Nocini, P. F. (2015). A topical desiccant agent in association with ultrasonic debridement in the initial treatment of chronic periodontitis: a clinical and microbiological study. New Microbiologica. 38(3):393-407.