Abstract

Aims: The aim of the study was to gain insight into the healing effects of Ardox-X® in periodontitis and peri-implantitis. Healing is induced through the release of active oxygen in the peri-dental and peri-implant area. The results were to be compared with the generally accepted – ‘gold standard’ - treatment strategies for these disease entities. As reported in the literature, in addition to mechanical/instrumental treatment, antimicrobials such as chlorhexidine digluconate (CHX) and hydrogen peroxide (H₂O₂) are often prescribed and used in these situations, as well as in many other different oral and dental disorders. These medications are known to have advantageous effects, but they also have their limitations, disadvantages and adverse effects. This pilot study is meant to suggest that Ardox-X® might be a better alternative.

Material and methods: A case control study, in which 33 patients were included, has been carried out to examine the effects of adjunctive treatment with Ardox-X® in periodontitis situations. Full mouth dental pocket depth recordings have been made before and within 3 months after treatment with Ardox-X®. In the peri-implantitis study 34 patients were included, with a total of 40 dental implants. They were all treated according to a standardized Ardox-X® peri-implantitis protocol and were both clinically and radiographically re-examined after 3, 6 weeks and after 3, 6 months, respectively.

Results: In the periodontitis study, after 3 months treatment with Ardox-X®, the average total pocket depth decrease was 56%. Different values were scored for male and female patients, 66 and 49%, respectively. Improvement was perceptible in all age categories. The age category of 40-44 years showed the greatest improvement (71%) and the category of 65-69 years the least (36%). There were no remarkable differences in relation to cigarette smoking habits: the average pocket depth decrease in smokers was 56%, in patients who had smoked in the past 55%, and in non-smokers 56%.

In the peri-implantitis study, the affected tissue had clinically noticeably recovered after 3 and 6 weeks in all cases. After 3 months, 75% of the peri-implantitis situations had been cured (with radiographically definite re-osseointegration in 15% of the implants), 9 peri-implantitis cases had not been cured yet and 1 implant was lost. After 6 months, radiographical examination showed re-osseointegration of 3 mm in 15% of cases, of 2 mm in 60%, and no signs of re-osseointegration in 4 cases.

Conclusions: From the case control periodontitis study results could be concluded that adjunctive Ardox-X® yielded better average total pocket depth reduction percentages than generally reported in the literature for other treatment strategies. From the Ardox-X® protocol peri-implantitis study results could be concluded that the clinical situation around implants improved markedly within 3 to 6 weeks in all cases. After 3 months, 75% of cases were clinically cured. Radiographically evidenced re-osseointegration of 2 mm could be noted in 60 % and of 3 mm in 15 % of cases after 6 months. These figures are indicative for faster and better pocket and peri-implantitis healing than reported in the literature for the generally accepted – ‘gold standard’ – adjunctive treatment regimens. A prospective double masked placebo controlled split mouth model adjunctive periodontitis treatment study with Ardox-X® is in its final preparation phase.