

Adjunctive minocycline microspheres

19 March 2016

Today at the 45th Annual Meeting & Exhibition of the American Association for Dental Research, researcher Ricardo Teles, University of North Carolina, Chapel Hill, USA and The Forsyth Institute, Boston, Mass., USA, will present a study titled "Adjunctive Minocycline Microspheres Decrease Periodontal Pathogens around Implants with Peri-implantitis." The AADR Annual Meeting is being held in conjunction with the 40th Annual Meeting of the Canadian Association for Dental Research.

The aim of this study was to compare the effects of adjunctive Minocycline HCl Microspheres (Arestin) with debridement alone on the levels of 40 subgingival bacterial [species](#) in the treatment of peri-implantitis. Researchers recruited 208 subjects (from 11 centers in the USA) with at least 1 implant with peri-implantitis and randomized to receive either mechanical debridement alone (n=104) or mechanical debridement followed by Arestin (1 mg) (n=104) at baseline and day 90.

After clinical examination, subgingival plaque samples from the deepest site of each qualifying implant were collected using paper points at baseline and 30 days post-baseline. Plaque samples were analyzed for the levels of 40 subgingival bacterial species using checkerboard DNA-DNA hybridization technique. Clinical examinations were performed at baseline, 90 and 180 days. Significance of differences in changes in mean levels and proportions of subgingival species from baseline to 30 days was tested using the Wilcoxon rank-sum test. Significance of differences in change from baseline in subject-level average probing depth (mm) between treatment groups was tested using mixed models for repeated measures.

The adjunctive use of Arestin resulted in statistically significantly (less than 0.01) greater reduction in the levels of 14 of the 40 subgingival species, including: *A. gerencseriae*, *A. odontolyticus*, *A. actinomycetemcomitans*, six members of the orange complex, all three red complex species, *S. noxia* and *T. socranskii*. In

contrast, only six of the 40 species had changes in their proportions that were statistically significantly (less than 0.01) different between treatment groups. Clinically, a statistically significantly greater reduction ($p=0.0035$) in mean pocket depth in the Arestin group (-1.06 mm) compared to control (-0.78 mm) was observed at day 180.

The use of adjunctive Arestin in the treatment of peri-implantitis resulted in significant additional reductions in the levels of multiple subgingival periodontal pathogens. Adjunctive Arestin resulted in greater peri-implant pocket depth reduction compared to mechanical debridement alone.

More information: This is a summary of oral presentation #0267, "Adjunctive Minocycline Microspheres Decrease Periodontal Pathogens around Implants with Peri-implantitis," which will be presented on Thursday, March 17, 2016, 12 p.m. - 12:15 p.m. at the Los Angeles Convention Center, room #411.

Provided by International & American Associations for Dental Research

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