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Evaluation of an air-abrasive device with amino acid glycine-powder during surgical treatment of peri-implantitis.

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OBJECTIVE: *The aim of this retrospective study was to analyze collected data concerning the effect of an air-abrasive device (Perio-Flow®) during surgical treatment of peri-implantitis without addition of any antimicrobials.*

METHOD AND MATERIALS: *Data reports from 22 implants with peri-implantitis surgically treated using either an air-abrasive device (Perio- Flow) (test group), or plastic curettes and cotton pellets impregnated with saline (control group) were analyzed for the present study. Clinical and radiographic parameters plaque index (PI), gingival index (GI), probing pocket depth (PPD), and bone loss (BL) were previously assessed at baseline, 6 months, and 12 months after treatment. A repeated measures ANOVA test was used for each clinical and radiographic parameter (PI, GI, PPD, and BL). The implant and the patient were considered separately as the statistical unit.*

RESULTS: *Regarding betweengroup comparisons, PI scores remained low during the entire study period (at implant and patient levels). At the end of the study, GI and PPD reductions were statistically higher ($P < .05$) in the Perio-Flow group (implant level), and no differences were observed between the two groups at patient level ($P > .05$) (repeated measures ANOVA test). It was also noted that BL analyses (implant and patient levels) revealed no differences between baseline and 12 months in both groups. Nevertheless, only 8% from each treatment group were considered stabilized after 12 months.*

CONCLUSION: *Within the limitations of the present study, both groups (Perio-Flow and its control group) revealed a significant reduction of the clinical parameters. Moreover, the air-abrasive device group yielded better improvements regarding GI and PPD when the implant was considered as the statistical unit. However, if the stabilization of the disease was the final objective, these two treatments failed in*

resolving its activity. A longer follow-up and a larger number of patients would be needed to confirm these results and the benefit of adding this air-abrasive method of decontamination to the surgical procedure.