

특강 I (Special Lecture I)

## Non - surgical management of advanced periodontal disease using laser and drug delivery system



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The purpose of this presentation is to examine the combination effect of pulsed Nd:YAG laser irradiation with local minocycline administration(LMA)on the clinical and microbiological prevalence in the advanced periodontal patient.

Eighteen bacterial species were measured by checkerboard DNA-DNA hybridization. Fifteen subjects(age 36 to 68) were monitored clinically and microbiologically at baseline and 1 and 3 month after treatment. Sampling sites were randomly assigned to one of the following groups: 1)sub-gingival laser treatment (10pps, 200mJ for 90sec); 2)LMA following laser treatment(30 sites); 3)laser treatment(30sites) with providoneiodine irrigation ; and 4)sham(insert of the fibre without irrigation) (31sites). Clinical assessment of bleeding on probing, pocket depth(PD) and attachment level(AL) and suppuration were made at 6 sites per tooth. Sub-gingival plaque samples were taken from periodontally involved sites with a probing depth of more than 4mm at baseline. PD and AL in the laser with LMA group were reduced compared to the laser group.

Though there was no significant difference between bacterial prevalence in both groups, laser with LMA group tended to show reduced Tanderella forsythensis and Porphyromonas gingival levels. These data suggest that pulsed Nd:YAD laser irradiation with local antibiotic application is effective in the management of advanced periodontal disease.