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**Anti-gingipain egg yolk antibody (IgY): Novel supportive immunotherapy for periodontitis**

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**Aim:** Our objective was to evaluate the effect of Anti-*Porphyromonas gingivalis* gingipains egg yolk antibody (IgY-GP) as an adjunct to scaling and root planning (SRP) in periodontitis patients.

**Methods:** IgY-GP was prepared by immunizing layer chickens with gingipains from *P. gingivalis* strain ATCC 33277. Two human volunteer trials were conducted to evaluate the effect of IgY-GP. The first trial was randomized, double-blind, placebo-controlled one, where 42 patients were randomly assigned to receive either a full-mouth SRP along with oral administration of IgY-GP or SRP with placebo. Clinical measurements including BOP and PD were recorded at baseline, 4 and 12 weeks post therapy. The second trial was conducted on 5 periodontitis patients who had high level of *P. gingivalis* in their subgingival flora, where IgY-GP containing ointment was administered directly into the periodontal pockets. Clinical parameters (BOP, PD) and bacterial measurements were recorded at baseline and 4 weeks post therapy.

**Results:** Both human studies show a significant improvement in mean PD, BOP in the IgY-GP group at four and twelve weeks after therapy. Parallel to the clinical changes, IgY-GP administration significantly reduced the number of *P. gingivalis* in the subgingival plaque from deepest pocket.

**Conclusions:** IgY-GP administration in conjunction with SRP in periodontitis patients resulted in significantly better improvement in both clinical and bacterial parameters compared to placebo group. IgY-GP may be an effective supportive immunotherapeutic therapy for periodontitis patients.