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Adjunctive Effects of Anti- Porphyromonas Gingivalis Egg Yolk Antibody with Scaling and Root Planning: A Randomized, Placebo Controlled Clinical Trial.

- **Category:** Clinical Research
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- **Financial Support:** None
- **Background:** Gingipains from Porphyromonas gingivalis play a major role in not only bacterial housekeeping but also inactivation of host defenses. We postulated that the inhibition of gingipains using passive immunization may reduce the pathogenic nature of P. gingivalis. In this study, we investigated the effect of anti-P. gingivalis egg yolk antibody against gingipains (IgY-GP) as an adjunct to scaling and root planning in patients with periodontitis.
- **Methods:** This randomized, double blind, placebo controlled parallel study involved 34 adult patients with untreated periodontitis who were randomly assigned to receive either a full-mouth scaling and root planning along with oral administration of IgY-GP or scaling and root planning with placebo. Clinical measurements were recorded at baseline and twelve weeks after therapy. The deepest pocket was selected and samples for microbiological testing were taken to determine the number of P. gingivalis using real-time PCR. Patients got coded study tablet their mouth around without chewing three times a day after meal or brushing. Tablet was containing 50mg IgY-GP or non immunized egg yolk antibody.
- **Results:** There was a significant improvement in mean probing depth in the IgY-GP group at 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:** The present study showed IgY-GP administration in conjunction with scaling and root planning in periodontitis patients achieved significantly better clinical and microbiological results than placebo group. IgY-GP may an effective immunotherapeutic agent in the treatment of periodontitis.

Effects of IgY-GP on clinical parameters

		PCR(%)	BOP(%)	Probing Depth (mm)
IgY-GP (n=18)	Baseline	54.4±18.8	31.5±19.4	2.3±0.6
	12W	56.5±15.9	25.3±16.9	2.1±0.6*
Control(n=16)	Baseline	59.9±20.1	38.9±21.9	2.4±0.6
	12W	59.1±18.9	32.3±21.6	2.3±0.6

*P<0.05

Effects of IgY-GP on the subgingival levels of *P. gingivalis*

		Total bacterial No. (×10 ⁶)	<i>P.g.</i> No.(×10 ⁴)	<i>P.g.</i> levels (%)
IgY-GP(n=18)	Baseline	1.1±1.1	2.6±6.6	2.2±4.6
	12W	0.6±1.2	0.2±0.4*	1.0±3.1*
Control (n=16)	Baseline	0.6±0.7	0.6±0.6	1.4±2.0
	12W	0.8±0.7	0.8±1.9	1.0±2.1

*P<0.05

Reference :

<http://www.perio.org/resources-products/research-forum09.htm#Sugano>