

POSTER PRESENTATION

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# Occurrence of *Porphyromonas gingivalis* fimA type II and prtC genotype among periodontitis patients

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## Background

*Porphyromonas gingivalis* fimbriae are classified into six genotypes (types I-V and Ib). Among them, occurrence of *fimA* type II genotype is more predominant in periodontitis patients. Similarly collagenase encoded by *prtC* gene is a potential virulence factor expressed by *P. gingivalis* strains associated with periodontal disease. The study was opted to detect the presence of *P. gingivalis* *fimA* type II and *prtC* genotypes in periodontitis patients.

## Methods

Subgingival plaque samples collected from 128 chronic periodontitis (ChP) and 72 aggressive periodontitis (AgP) patients were subjected to PCR to screen for the presence of *fimA* type II and *prtC* gene of *P. gingivalis*. Chi-square test was employed to compare the prevalence of the genotypes.

## Results

The prevalence of *P. gingivalis* *fimA* type II genotype among ChP, AgP and health was 50.5%, 45.3 % and 13.60%, respectively. While, prevalence of *P. gingivalis* *prtC* genotype among ChP, AgP and health was 49.5%, 45.3% and 9.10% respectively. *P. gingivalis* type II *fimA* +/*prtC* + genotype were present in 28.9% of ChP, 33.3% of AgP patients and 4.5% of healthy subjects. Patients positive for both the genes showed probing depth of  $\geq 7$ mm. Significant difference was observed between periodontitis and healthy subjects for all the three genotypes ( $P=0.001$ ).

## Conclusion

The results show that *P. gingivalis* *fimA* type II and *prtC* genotypes are equally associated with chronic and aggressive periodontitis. The predominance of *P. gingivalis* *fimA* type II+ / *prtC*+ genotype in teeth with deep pockets or serious attachment loss, suggest their role in periodontal destruction.

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