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Presence of periodontal pathogens in a life-time

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- INTRODUCTION -

The microbiota from periodontal pockets is complex with a predominance of gram negative anaerobic bacterial species.

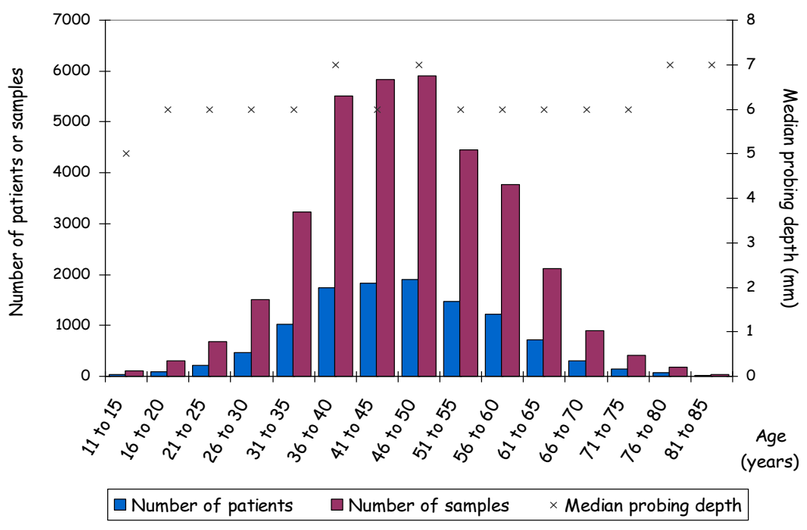
The aim of the study was to determine the prevalence of 4 selected bacterial species, e.g. *Actinobacillus actinomycetemcomitans, Porphyromonas gingivalis, Bacteroides forsythus (Tannerella forsythensis)* and *Treponema denticola* in a large population of subjects, aged 11 to 85 years.

- MATERIAL AND METHODS -

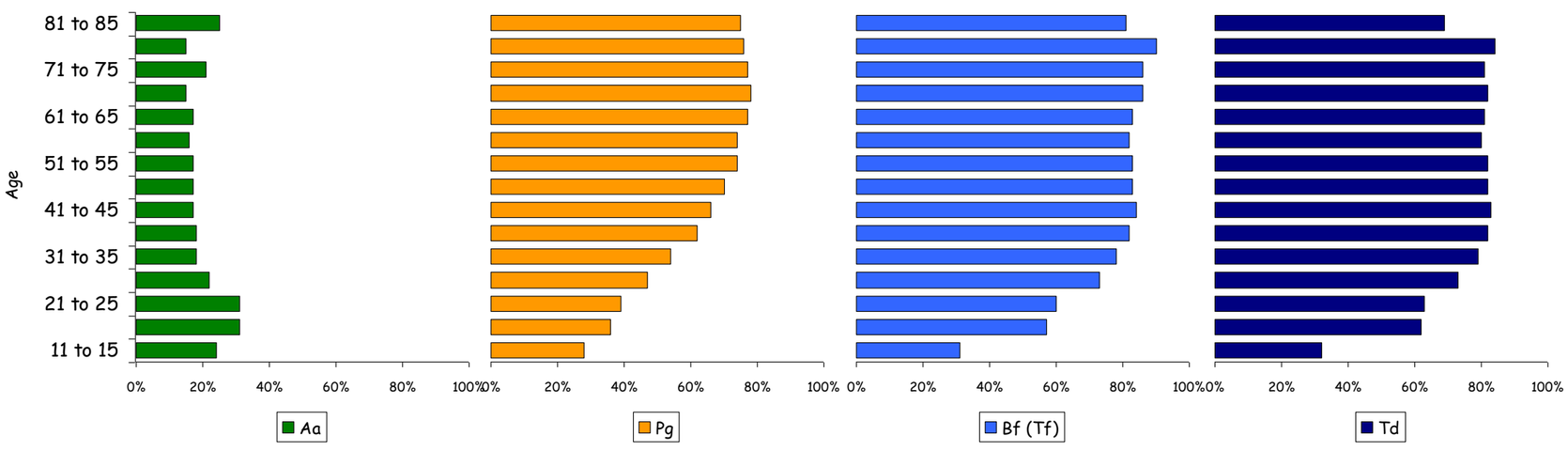
Sub-gingival plaque samples were collected before treatment from periodontally diseased sites using paper points. Oligonucleotide probe hybridization was used to quantify *Actinobacillus actinomycetemcomitans, Porphyromonas gingivalis, Bacteroides forsythus (Tannerella forsythensis),Treponema denticola* and the total bacterial content (Tbl) in the samples. A total of 37'819 samples from 12'234 patients were included in the final analysis. Clinical data including sex, age, smoking habits, probing depth were available for each patient.

- RESULTS -

Population distribution



Bacterial distribution according to age



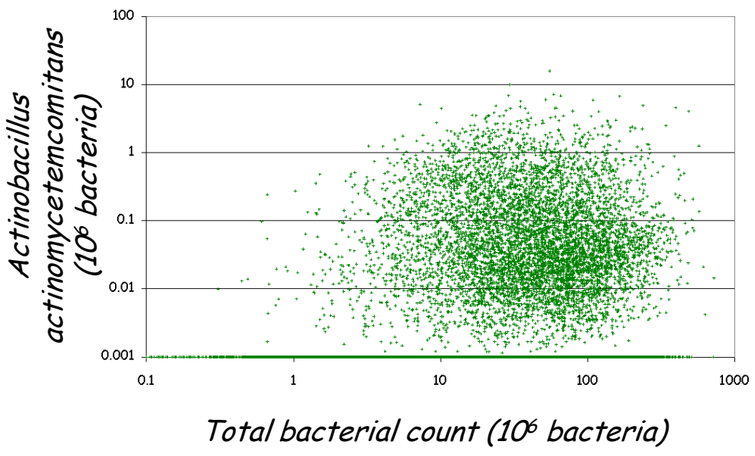
The prevalence of *A.a* was found to be high in young subjects (<30 years).

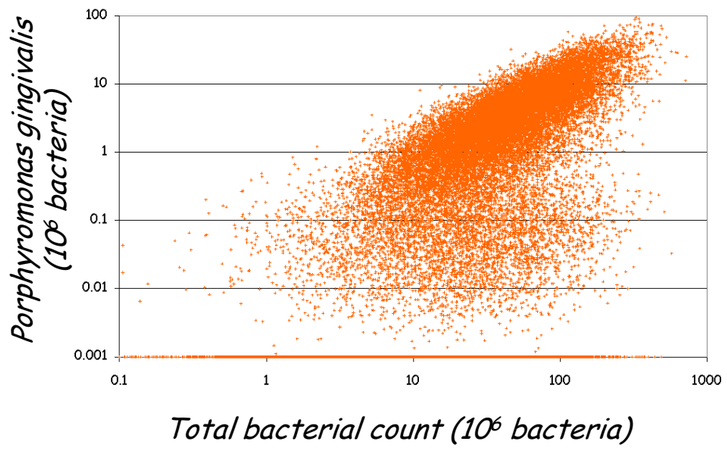
The prevalence of *P.g* increased with age to reach a maximum after the age of 60.

The prevalence of *B.f.* and *T.d.* reached a plateau after the age of 40.

Correlation between bacterial species and total counts

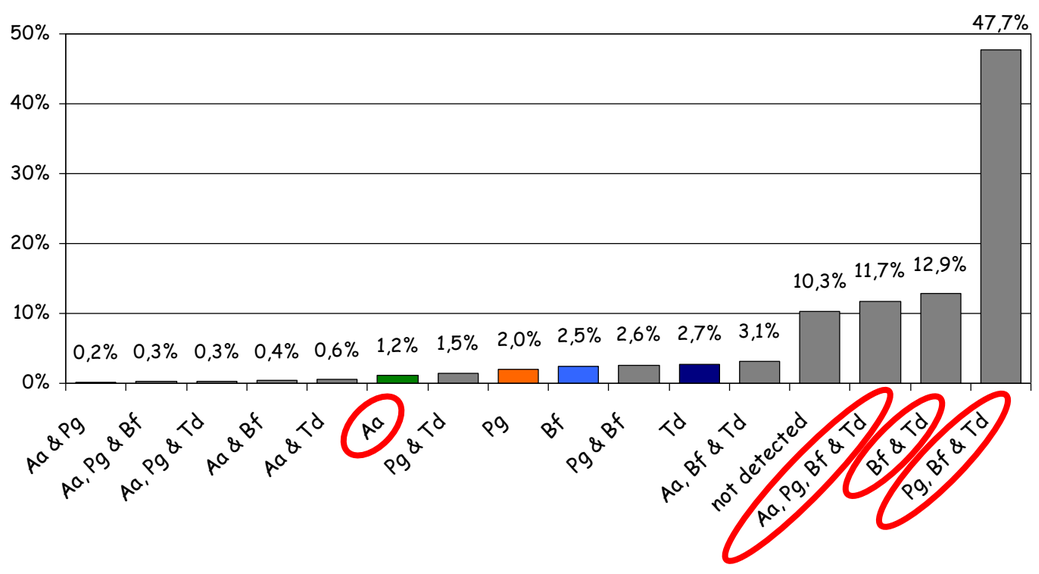
Values for *A.a.* were found to be independent from total counts.

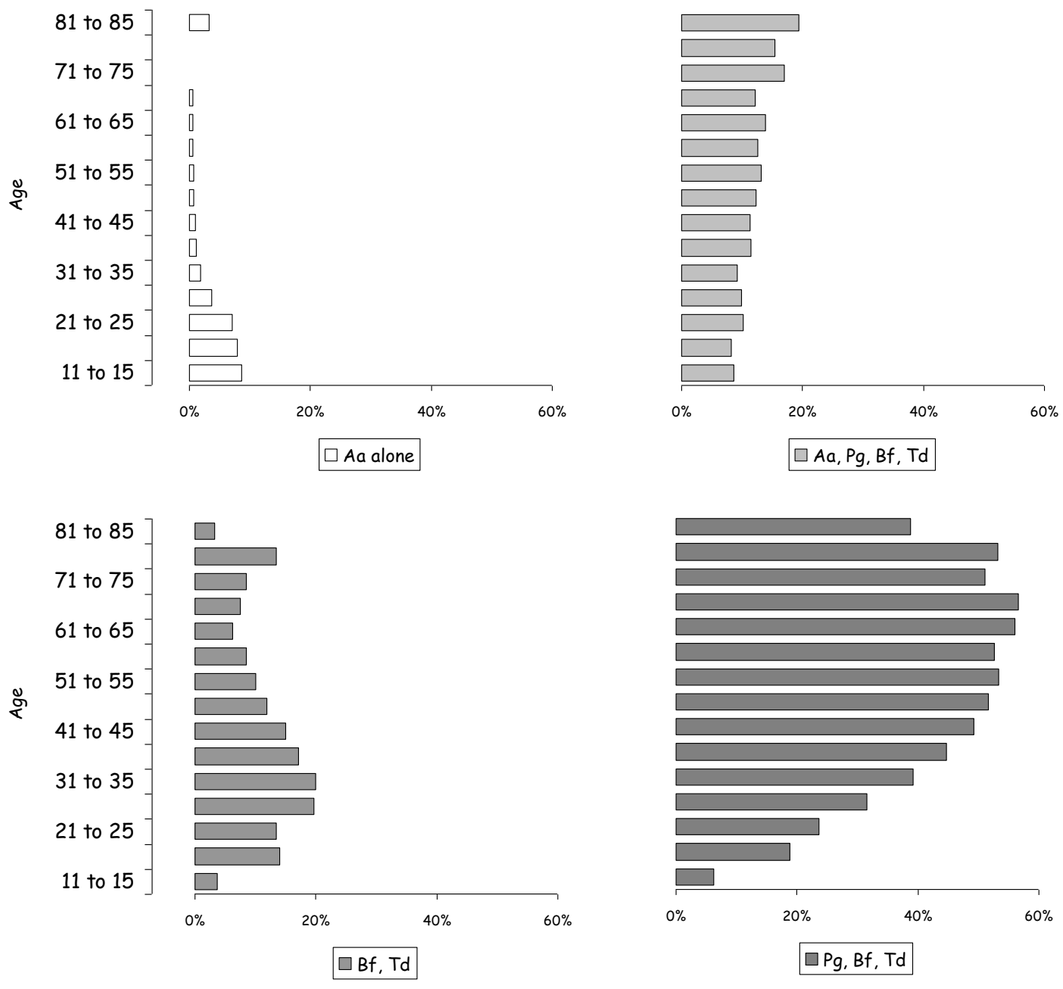




Values for *P.g., B.f.* and *T.d.* were, for a great part, directly proportionnal to total counts.

Associations between bacterial species





The simulataneous presence of *P.g., B.f.* and *T.d.* was found in 47.7% of the samples.
11% of the samples contained all 4 bacterial species.
Bacterial associations showed different prevalence patterns according to age.

- CONCLUSIONS -

The results indicate that *A.a., P.g., B.f.* and *T.d.* are frequently associated with periodontal destruction.

They confirm that *A.a.* is more frequently found in younger age categorie, whereas the prevalence of *P.g., B.f.* and *T.d.* increases with age.

P.g., B.f. and *T.d.* is the association the most frequently detected.