

# Identification of *Capnocytophaga* species from oral cavity of healthy individuals and patients with chronic periodontitis using phenotypic tests

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## Abstract

**Background:** The role of *Capnocytophaga* species in oral health and disease is not well studied, and there are no reports from India about their prevalence in the oral cavity. Few attempts have been made to identify all seven cultivable species of *Capnocytophaga* from gingival pocket. The aim of this study was to detect the prevalence of *Capnocytophaga* species in healthy individuals, gingivitis, and periodontitis using phenotypic tests.

**Materials and Methods:** A total of 150 adult subjects between the age ranges of 20–55 years were included in the study comprised of 50 each of subjects with gingivitis, periodontitis, and healthy individuals. Subgingival plaque was collected and cultured on blood agar, TBBP, and Dentaid media. Species identification was done by performing biochemical tests and hydrolysis tests.

**Results:** Among 150 samples, 28 (18.67%) yielded *Capnocytophaga* species. The prevalence of *Capnocytophaga* species was statistically analyzed using Chi-square test, Mann–Whitney U-test, and Fisher’s exact test. The prevalence was higher in healthy individuals (30%), compared to gingivitis (14%) and periodontitis (12%). The prevalence of *Capnocytophaga ochracea*, *Capnocytophaga gingivalis*, and *Capnocytophaga granulosa* was more in healthy individuals than in gingivitis and periodontitis.

**Conclusion:** We conclude that *Capnocytophaga* is more frequent in healthy human mouth than in diseased individuals. There is a need to further study both sub- and supra-gingival plaques for the presence of this organism.