

# Viability of bacteria in dental calculus – A microbiological study

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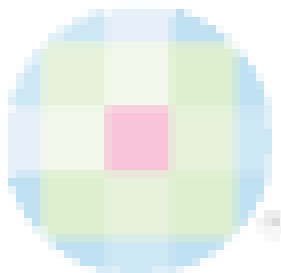
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## Abstract:

**Aim:** The aim of this study was (1) To investigate the viability of bacteria within supragingival and subgingival calculus, (2) To examine motility of bacteria, and (3) To identify bacterial morphotypes in calculus. **Materials and Methods:** Supra and subgingival calculus were harvested from 30 subjects having clinical evidence of chronic inflammatory periodontal disease and were divided into two groups. Samples from both groups were immediately transported to the Department of Microbiology for gram staining, acridine orange staining, bacterial culture and to the Department of Oral Pathology for dark field microscopy. **Results:** Gram staining revealed presence of bacteria within the samples. Dark field microscopic examination revealed presence of filamentous organisms, spirochetes, and motile short bacilli. Acridine orange fluorescent stain showed that the viable bacteria appeared apple green. Bacterial culture revealed presence of a variety of aerobic organisms. **Conclusion:** From the results, it appeared that viable bacteria were present within calculus especially within internal channels and lacunae.

## Key words:

Acridine orange staining, aerobic bacterial culture, gram staining, spirochetes, subgingival calculus



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