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Antimicrobial activity of bael, cinnamon and neem extract mouthwashes against oral microorganisms: A comparative in vitro study

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Aim: To compare the in vitro antimicrobial activity of bael, cinnamon, neem extract mouthwashes on *Streptococcus mitis*, *Streptococcus mutans*, *Enterococcus faecalis*, *Campylobacter rectus*, *Porphyromonas gingivalis* and *Candida albicans* and to compare it with the gold standard chlorhexidine mouthwash.

Materials & Methods: Fresh leaves of bael, neem and barks of cinnamon were collected, washed, shade dried for 48 hours and powdered individually. Ethanolic extracts of the test products were prepared and incubated at 37 °C. The Microbial Type Culture Collection (MTCC) strains of *Streptococcus mitis*, *Streptococcus mutans*, *Enterococcus faecalis*, *Campylobacter rectus*, *Porphyromonas gingivalis* and *Candida albicans* were procured, cultured in appropriate selective medium and incubated up to 48 hours. Agar plates were prepared and the cultures were spread in the plates. Wells were made in the agar surfaces and the leaves extracts were poured into the wells of all agar plates. The agar plates were incubated at 37 °C for 24 hours and the zones of inhibition was measured every day for seven days by the agar-well diffusion method.

Results: All the test products had an antimicrobial effect against the test pathogens. Bael leaves had the highest zone of inhibition against *Streptococcus mutans*, *Enterococcus faecalis*, *Campylobacter rectus* and *Porphyromonas gingivalis* when compared to the gold standard chlorhexidine mouthwash.

Conclusion: It can be concluded from the study that bael has proved to have a significant antimicrobial effect against the common oral microorganisms when compared to the gold standard chlorhexidine mouthwash and opens new perspectives for its use.

Biography

Divya Raghunathan has completed her BDS (Bachelor of Dental Surgery) from Thai Moogambigai Dental College and Hospital, Chennai and currently studies her MDS (Masters of Dental Surgery) in Public Health Dentistry at Meenakshi Ammal Dental College and Hospital, Chennai. She is currently practicing in Chennai in her private clinic and has one publication in a reputed international journal.

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