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A study to evaluate and compare the efficacy of preprocedural mouthrinsing and high volume evacuator attachment alone and in combination in reducing the amount of viable aerosols produced during ultrasonic scaling procedure.

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Abstract

BACKGROUND AND OBJECTIVES:
In recent years, ultrasonics has gained prime importance and is considered a valuable tool in the dentist's armamentarium. Studies have confirmed that an aerosolized bacterial contamination is produced during the use of ultrasonic scalers.

AIM:
To evaluate and compare the efficacy of preprocedural mouthrinsing using a bis-biguanide (chlorhexidine gluconate 0.2%) and high volume evacuator attachment alone and in combination in reducing the amount of viable aerosols produced during ultrasonic scaling procedure.

MATERIALS AND METHODS:
A total 90 subjects were assigned to group I (who rinsed with 0.2% chlorhexidine gluconate prior to scaling), group II (high volume evacuator attachment was used during ultrasonic scaling) and group III (who rinsed with 0.2% chlorhexidine gluconate prior to scaling and in whom high volume evacuator attachment was used during ultrasonic scaling). Control group consisted of subject's whose mouth was scaled using a piezoelectric ultrasonic scaler without preprocedural rinsing or high volume suction. Aerosol samples were collected using blood agar plates. The blood agar plates containing the aerosol sample were taken to the microbiology department as soon as the sampling was over and were subjected to aerobic culturing.

RESULTS:
The values obtained showed that all the three groups were effective in reducing the mean colony forming units (CFUs).

CONCLUSION:
The results of this study showed that preprocedural rinse and high volume suction were effective when used alone as well as together in reducing the microbial load of the aerosols produced during ultrasonic scaling. There was a significant reduction in the number of CFUs in aerosol samples obtained.