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Range and Percentage of Paint Removed by Air Scaler in Subgingival Scaling and Root Planing Using a Teaching Model vs Curettes

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Abstract: We compared the range and percentage of paint removed by air scaler, in subgingival scaling and root planing with curettes using a teaching model.

The roots of removable teeth were uniformly coated with a paint layer and the model attached to a mannequin. Mechanical instrumentation was performed using the SONICflex[®] LUX 2000 L (Kavo EWL, Germany) air scaler with a SONICflex[®] paro tip compared to Gracy curettes (Mini-five[®], Hu-Friedy, U.S.A.). Teeth examined were lower left, right central, and lateral incisors, upper left first premolar, and lower left second molar. Subjects were 20 operators equally divided into an amateur group (<1 year of periodontal practice) and a professional group (≥8 years of periodontal practice). Instrumented areas were analyzed to assess the range and percentage of paint removed by a computerized image analysis and compared for 2 types of instrumentation and 2 operator's groups.

In the amateur group, the range reached by the air scaler was deeper than that of the curette for almost all aspects of examined teeth and among professionals, deeper for all aspects.

The lingual aspect of the upper left first premolar and the distal aspect of the lower left second molar was significant (p<0.01).

The percentage of paint removed by curettes was the same and/or greater than that by the air scaler in both groups on lower incisors and the upper left premolar. However, on the lower left second molar, the percentage of paint removed by the air scaler was greater than that by curettes. The distal aspect in the professional group was significant (p<0.01).

The range in the professional group was deeper than that in the amateur group for almost all aspects of teeth.

The percentage of paint removed in the professional group was greater than that in the amateur group for all aspects.

The range reached by air scalers was deeper than that by curettes. For aspects with deep intrabody defects, both the range and percentage of paint removed by air scalers were superior to those by curettes. Air scaler technique was appeared difficult for the amateur group, suggesting the need for greater practice to achieve instrumentation effectiveness.

Key words: [scaling and root planing](#), [air scaler](#), [range of paint removed](#), [percentage of paint removed](#), [years of practice](#)

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