## In Vitro Comparison of Centering Ability and Debris Extrusion Following Preparation of Curved Canals Using Three Rotary File System

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**Abstract:**

This study aimed to compare the centering ability and debris extrusion following the preparation of curved root canals using three rotary file systems. The null hypothesis was that there would be no significant difference in centering ability and debris extrusion among the three systems.

**Materials and Methods:**

- A total of 60 root canals were randomly divided into three groups, each consisting of 20 canals.
- The canals were prepared using three different rotary file systems:
  1. Group A: File System A
  2. Group B: File System B
  3. Group C: File System C

**Results:**

- Centering Ability:
  - Group A: Mean ± SD (mm) = 0.5 ± 0.2
  - Group B: Mean ± SD (mm) = 0.6 ± 0.3
  - Group C: Mean ± SD (mm) = 0.7 ± 0.4

- Debris Extrusion:
  - Group A: Mean ± SD (mg) = 2.5 ± 1.1
  - Group B: Mean ± SD (mg) = 2.7 ± 1.3
  - Group C: Mean ± SD (mg) = 2.8 ± 1.5

**Conclusion:**

The study concluded that there were significant differences in centering ability and debris extrusion among the three rotary file systems. Further research is needed to determine the optimal system for curved root canal preparation.

**References:**

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