



## CFAO GRADUATE STUDENT POSTERBOARD ABSTRACTS

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### **Pulpal status of ectopic maxillary canines after orthodontic treatment**

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**Introduction:** Pulpal necrosis is one of the adverse effects associated with orthodontically treated ectopic maxillary canines. Information correlating the pulpal reactions and orthodontic movement is scarce.

**Objective:** To evaluate the influence of the initial position of ectopic canines on the pulpal status following orthodontic treatment.

**Sample:** The sample was comprised of 20 patients (13 females and 7 males) with a mean age of 21.7 years.

**Methods:** Forty maxillary canines were divided into two groups: ectopic and non-ectopic (control). All participants were asked to revisit the University of Manitoba orthodontic clinic after completion of treatment to undergo a pulpal vitality test in order to evaluate the vitality of their canines. The pulpal evaluation included thermal, electrical, and percussion tests. Initial panoramic radiographs were used to assess the angle of long axis of the impacted canine and the linear distance to the occlusal plane.

**Results:** The Mixed-effects Logistic Regression Model showed no statistically significant difference between the ectopic and control canine groups with regard to the pulpal necrosis ( $p > 0.0744$ ). The Kruskal-Wallis Test showed no statistically significant difference when considering the variables to assess the initial position of the canine ( $p > 0.0797$ ,  $p > 0.285$ ). From a clinical standpoint, it seems relevant to report that 12 teeth (46.15%) presented with necrosis of the dental pulp in the ectopic group whereas only 2 teeth (14.29%) had the same diagnosis in the control group.

**Conclusion:** Pulpal necrosis may be a side effect of orthodontic treatment for ectopic maxillary canines.