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| **Name:** |
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| 7A-1 |
| **Pathology Question:** |
| Does endodontically treated teeth affect orthodontic movement? |
| **Report:** |
| When teeth are moved orthodontically, there are cellular processes that cause bone to breakdown and rebuild. These processes are initiated by the force exerted onto the tooth by the orthodontic bracket. The force produces spots of tension and compression within the bony socket which will induce odontoblastic and odontoclastic avtivity resulting in a remodeling of bone structure around the root of the tooth. (3) Orthodontic movement is mediated by the PDL, and therefore, performing orthodontic movement on an endodontically treated tooth is not a contraindication. (2)  Orthodontic movement of teeth without a pulp is possible. There are some authors that believe moving an endodotically treated root with orthodontics are more susceptible to root resorption, while others see no difference. In some studies, it was noted that there was less external apical root resorption during orthodonitic movement in endodontically treated teeth compared to vital teeth. (2) Recognizing that an endodontically tooth can be moved orthodontically, it is recommended that a tooth needing endodontic treatment receives this treatment prior to orthodontic movement. A tooth that is already displaying resorption may have an increased amount of resorption with orthodontic movement, and should be treated endodontically first (1).  In summary, orthodontic treatment can be done on patients with endodontically treated teeth with excellent results. If the quality of the endodontic treatment is good, there should be no difference in external apical root resorption when compared to a vital tooth. Endodontic treatment should be performed prior to orthodontic movement due to the possibility of increased resorption with orthodontic movement (1). |
| **References:** |
| 1. Orlando, T., & Filho, J. (2013). Orthodontic treatment in an endodontically treated maxillary incisors. *European Journal of General Dentistry,* *2*(1). doi:10.4103/2278-9626.106823 2. Consolaro, Alberto et al. “Orthodontics and Endodontics: clinical decision-making.” *Dental press journal of orthodontics* vol. 25,3 (2020): 20-29. doi:10.1590/2177-6709.25.3.020-029.oin 3. Nimeri, G. (2020, February 9). *Tooth Movement Histology*. Lecture presented at Marquette University School of Dentistry. |