



TREASURE VALLEY
ENDODONTICS

May 4, 2010

G. Brent Adams D.M.D.
6144 Birch Lane
Nampa, ID 83687

Dear Dr. Adams:

In mid April 2010, a copy of an excellent publication by the American Association of Endodontists entitled *Endodontics: Colleagues for Excellence* was mailed to each member of the American Dental Association. This Spring 2010 issue of the newsletter included **superb instruction with excellent images describing proper access preparation and identification of the orifice of root canal systems. Any dentist who performs endodontic treatment, whether experienced or novice, would likely benefit from careful study of this short newsletter.** I encourage you to **learn and practice by the various anatomic laws specified in the newsletter** that will empower you to accurately locate root canal systems. In the event you no longer have a copy, the newsletter and some related information can be accessed free of charge at <http://www.aae.org/dentalpro/ClinicalNewsletters>.

Key principles from the newsletter and articles (phrases in quotations are from the newsletter):

- **Inadequate biomechanical instrumentation** of root canal systems **is the cause** of most endodontic failures. Improving your ability to locate and treat canals will increase your success.
- **Access** the pulp chamber **according to the Law of Centrality** to the appropriate depth.
- Properly **extend the access following** the pulp chamber outline using **the Law of Concentricity**.
- **Uncover the entire pulpal floor** before searching for any canal orifice **employing the Law of Color Change**: the pulp chamber floor is always darker than the walls. If this light-dark junction is not seen, overlying structure (e.g., restorations, tertiary dentin, pulp calcifications, pulp chamber roof) must be removed. *“The clear identification of the floor-wall junction is the single most important aspect of the accessing phase of endodontic treatment.”* Failing to completely uncover the pulpal floor not only leaves potential canals unidentified but also leaves remnants of vital or necrotic pulp tissue in the pulp chamber thereby increasing the chance of failure.
- **Identify each canal orifice by applying the Laws of Symmetry and Orifice Location** and understanding that root canal **orifices are located at pulpal floor-wall junctions.**

The anatomic relationships described in this newsletter **are present in the great majority of teeth.** However, **some of these laws may not be relevant when treating certain types of teeth**, most notably the maxillary molars. Unfortunately, most of us were probably taught in dental school that maxillary molars *sometimes* have 4 canals. Well-conducted research clearly demonstrates that **the “overwhelming majority” (>90% according to Kulild & Peters, 1990 and Stropko, 1999) of maxillary molars have at least 4 root canal systems.** Diligent clinical effort confirms this research as shown by the chart below which tracks every maxillary 1st and 2nd molar treated in my practice through 4/30/10.



TREASURE VALLEY
ENDODONTICS

	Max 1st Molars	Max 2nd Molars	
No MB2 Identified	5	8	
Total MB2 found	167	86	253
Total Treated	172	94	266
% MB2 found	97.1%	91.5%	95.1%

Failing to locate, debride, and disinfect all areas previously filled with pulp tissue places the tooth at risk for developing bacterial infection and apical periodontitis. **Signs of pathosis** from pulp tissue left under calcified tooth structure, in isthmuses between canals, in fins extending from canals, and in untreated canals can appear within weeks or months but **often only manifest after several years.**

Systematically following the techniques described in this newsletter **will help you** accurately determine the number of root canal systems present in each tooth that you treat and better enable you **to provide your patients with quality treatment.** In the event you encounter a situation where you cannot identify and remove all remnants of pulpal tissue, particularly in maxillary molars which virtually all have at least 4 canals, please refer your patient to an endodontist. *I hope to be fortunate enough to earn and maintain your trust in providing quality endodontic treatment to your patients.*

For your review, please see the enclosed radiographs and clinical images of a few cases treated in our office following the principles discussed in this newsletter. I hope you find this information helpful and I welcome your questions and/or feedback.

Sincerely,

Stanton D. Widmer, D.D.S.