GreenRoot News VOL1 ISSUE 4

A case of missed Radix

Chance favors the prepared mind

- Louis Pasteur

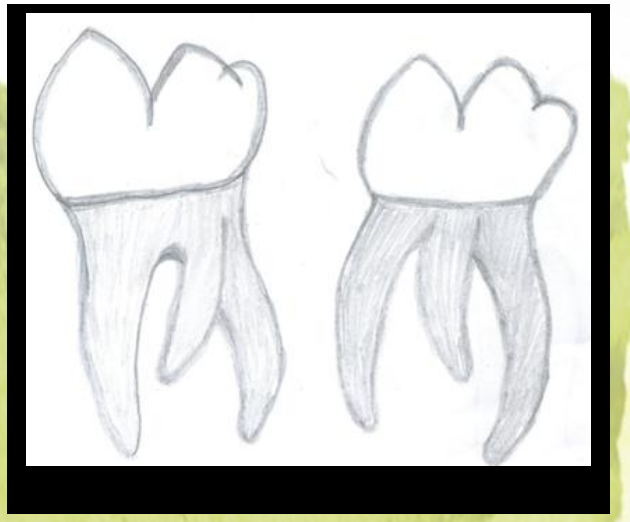
A 14 year old Asian female presented to our office complaining of pain in her lower left molar for the past 1 month. Tooth #19 was endodontically treated a year back by a local Endodontist. She went back to her Endodontist but he was unable to find any problems with the previously done Root canal treatment. She came to us seeking a second opinion.

Patient described pain as constant & spontaneous in nature, hurts on biting or when she presses on her buccal gingiva. She rated pain as 8 on a scale of 1-10 with 1 being the lowest & 10 being the highest.

Upon clinical exam, #19 is tender on percussion & palpation. Buccal gingiva in relation to #19 was indurated indicating a beginning of an abscess.

Upon radiographic exam, even though the straight on PA showed adequately performed RCT, the angled radiographs showed a possible untreated radix. A Cone beam computed tomography (CBCT) scan was taken to obtain additional information. CBCT clearly indicated the presence of a missed supernumerary root distobuccally (Radix paramolaris) & the associated radiolucency. CBCT also indicated that the radix was located in close proximity to distobuccal (DB) orifice & hence facilitated the location of the canal easily during re-treatment.

The radix was treated in two visits with Calcium Hydroxide as an interim dressing.



- *Radix is a supernumerary root that is most commonly seen in mandibular molars.*
- *When the supernumerary root is located distolingually, it is called a **Radix Entomolaris (RE)** & when distobuccal, it is termed **Radix Paramolaris(RP).***
- *RP is a very rare and less frequent than the RE. The prevalence of RP was found to be 0% for the first mandibular molar, 0.5% for the second and 2% for the third molar.*
- *Highest in populations with Mongoloid traits such as the Chinese, Eskimo and American Indians (5-30%).*

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Fig.1: Clinical images of extracted mandibular molars with a radix entomolaris or paramolaris. (A) first molar with a radix entomolaris [distolingual view (left), lingual view (right)]. (B) radix entomolaris on a third molar (lingual view). (C) first molar with a separate radix paramolaris (buccal view). (D) first molar with a fused radix paramolaris (buccal view). *(Calberson FL et al J Endod 2007; 33:58–63)*

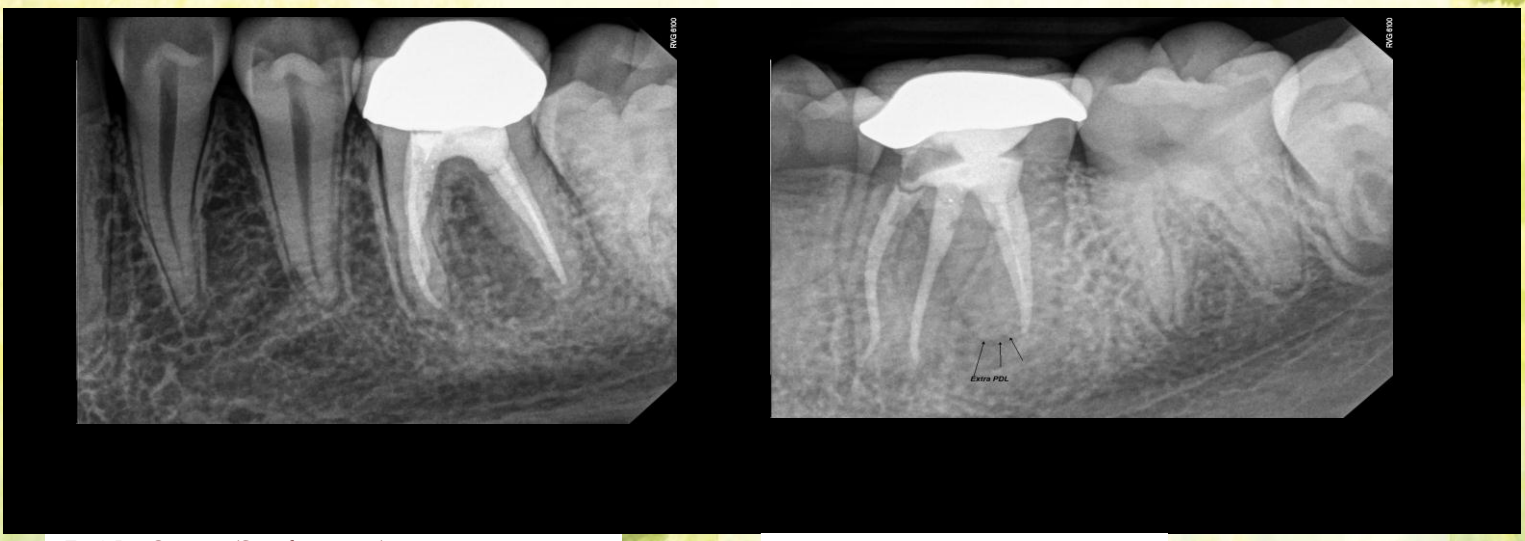

Fig.2:Pre-Op x-ray (Straight on view)

Fig.3: Pre-op X-ray (Angulated view)

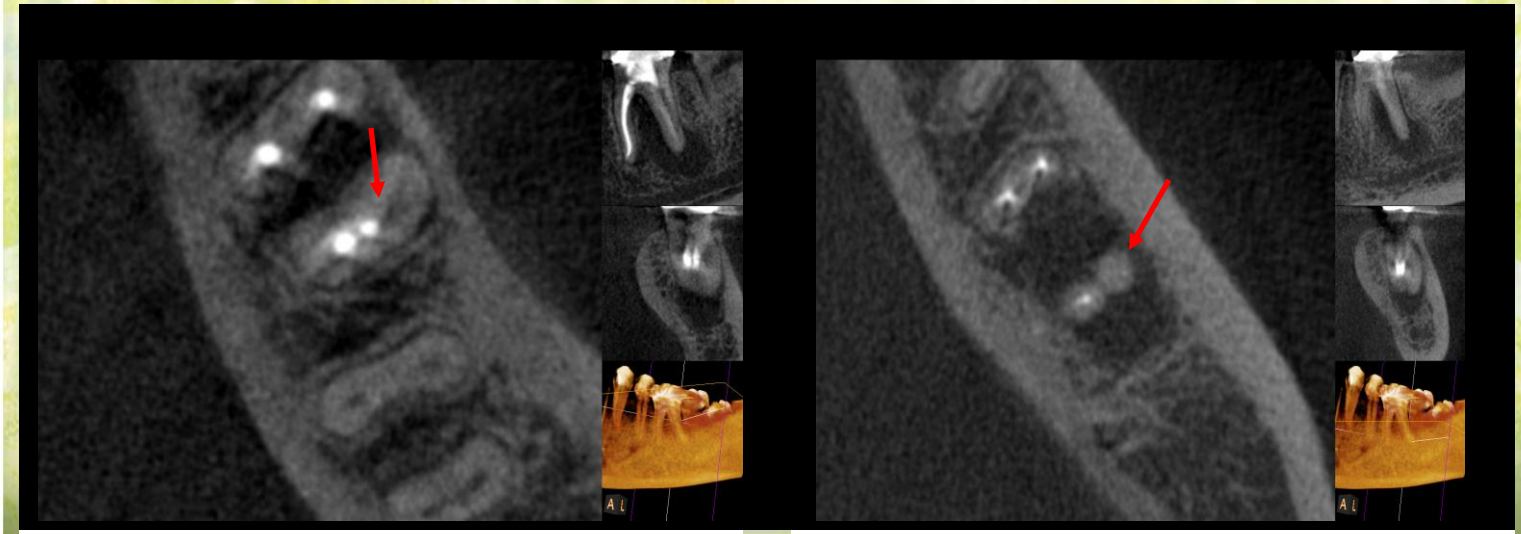

Fig.4: Axial view showing a close proximity of RP to Distobuccal (DB) orifice

Fig.5: Axial slice showing the presence of Radix Paramolaris

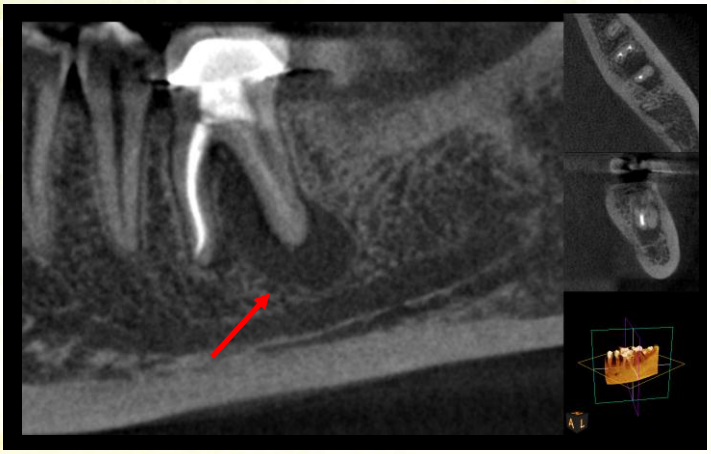

Fig. 6: Coronal slice showing radiolucency associated with distal root

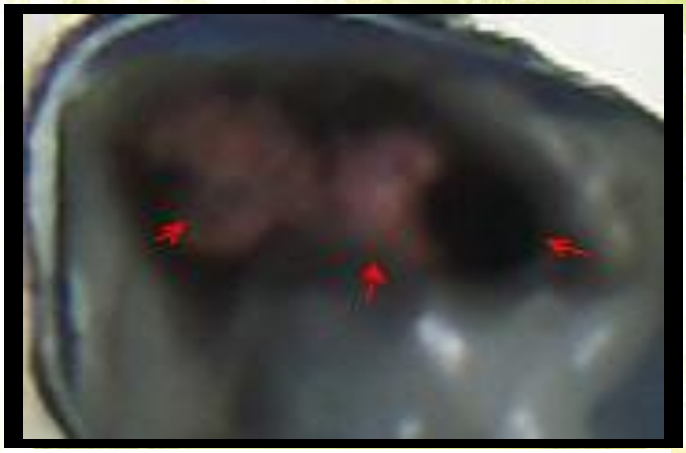

Fig. 7: Microscopic picture showing DistoLingual (DL), DistoBuccal (DB) & Radix Paramolaris (RP)

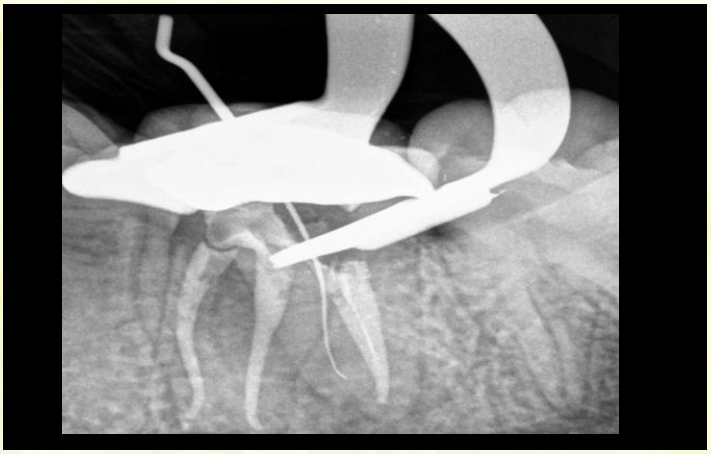

Fig. 8: WL file PA

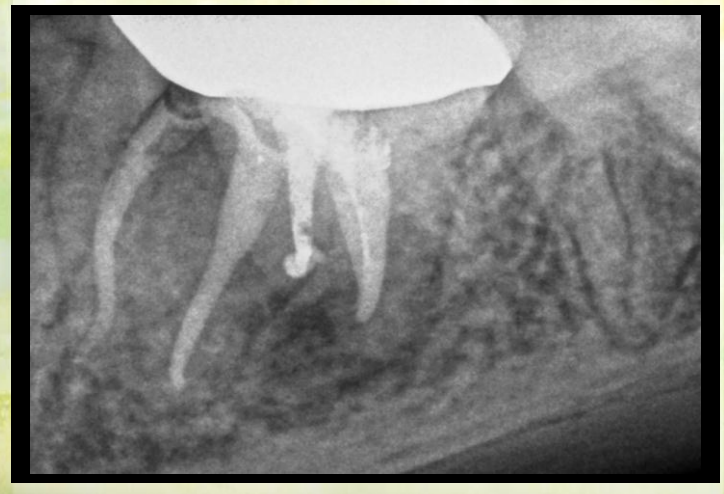

Fig. 9: Post op x-ray

- **For the convenience of your patients, we are now open Evenings & Saturdays.**
- **Emergencies will be accommodated & treated on the same day.**
- **Payment plans available for patients needing financial assistance.**
- **20% discount for patients with no insurance.**