



When a bird walks like a duck, swims like a duck, and quacks like a duck, is it not reasonable to call such a bird a duck? Perhaps not, when considering a diagnosis of vertical root fracture. The images on the side are of a tooth that has a lot of the hallmarks of a fracture but is not actually fractured. The referring dentist discovered a narrow 10mm probing defect on the buccal surface of the 37 which also had a sinus tract in close association. Some of the other features this tooth has that are associated with fractures include:

- Most posterior tooth in occlusion
- Heavily restored bridge abutment
- Mesially inclined
- Non-divergent root form
- Widened PDL extends along most of the length one of its roots
- Lack of a radiolucent 'halo' centred at an apex

In addition, the patient was over the age of thirty, had a stressful job, and thought the 36 was lost due to a 'crack'. In contrast to the aforementioned there was neither mobility nor evidence of a clenching/grinding habit or strong bite.

A cone beam CT would allow a more detailed evaluation of the 37 and surrounding hard structures. Such images are immensely helpful but beware false positive and negative results abound here too. Another option considered was a diagnostic surgery which allows direct visualisation of the buccal cortical plate and possible root surface. The patient preferred to forgo the CBCT and diagnostic surgical options and proceed with a non-surgical diagnostic access.

Even with the benefit of a digital operating microscope with Hergestellit in Deutschland optics no evidence of a fracture was seen during treatment. The canals were instrumented, irrigated, and medicated. Sometimes a lack of healing, despite our best efforts, is relied upon for diagnosis of a catastrophic fracture.

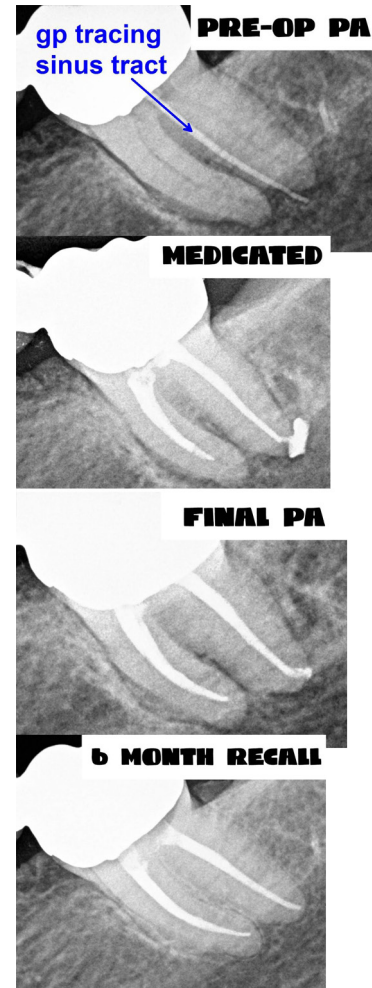
When the patient returned in thirty days neither the sinus tract nor narrow probing defect was present. We completed the endodontic treatment and the patient was instructed to advise us if any problems developed. The six month recall examination confirmed the 37 had responded well to treatment and no fracture was indeed present. The patient was pleased as punch both this tooth and the bridge were saved.

Just because a tooth probes like it has a fracture, looks like it has a fracture on the PA, and is heavily restored does not mean it is as dead as a duck and beyond redemption. This tooth was a lucky duck and there are more like it out there. It behooves us to find and save them. Do not be a quack and rely too heavily on the good ol' duck test when diagnosing a possible vertical root fracture.

Regards,



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