

> **WHAT'S  
SAP?**

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Tenderness to biting, percussion, or palpation are the hallmarks of symptomatic apical periodontitis (SAP). Inflammation of the periodontium is the source of the elevated response to physical stimuli for a particular tooth. It is possible but very unfortunate and unlikely to have multiple teeth in a quadrant undergo SAP simultaneously. Malocclusion must always be ruled-out as a possible cause of SAP, especially when there is more than one hypersensitive tooth.

SAP is typically associated with the following pulp diagnoses: necrotic pulp, symptomatic irreversible pulpitis, previously treated, and previously initiated treatment. Re-evaluation and testing are warranted if a tooth with SAP has a pulpal diagnosis of either a healthy pulp or reversible pulpitis. Endodontic treatment to alleviate SAP will not succeed if the pulp condition was not the cause of the apical inflammation.

Widening of the apical PDL is not necessary for a diagnosis of SAP. In the pre-operative PA above both the 35 and 37 have no radiographic signs of abnormality or pathology. Yet either tooth could have SAP if it demonstrated unique, reliable, and repeatable hypersensitivity. In this case, the 36 was unique in its hyper-response to bite and percussion. Due to their proximity to 36, both the 35 and 37 had slightly elevated responses to bite/percussion. There was no tenderness to buccal palpation for any teeth in quadrant three.

Patients are remarkably inaccurate at identifying the tooth with SAP. In every case it is necessary to perform a systematic and thorough periradicular evaluation, even if a patient is confident that a particular tooth is the source of the problem. In the case above the patient was not sure if it was the 36 or 37 that had lingering sensitivity to cold (>5sc.) and pronounced pain when chewing. After a comprehensive evaluation and testing the diagnosis for 36 was: symptomatic irreversible pulpitis with SAP. Four canals were located and the treatment was completed in one appointment.

Palpation of the buccal and lingual gingiva is the first of the periradicular tests. It allows you to gauge the overall sensitivity in the quadrant and the person's pain threshold before tapping on any teeth. The tapping is typically done lightly with the handle-end of an intra-oral mirror. Light finger pressure can suffice for a particularly sensitive case. Always test at least one to two teeth away from the one you suspect to be problematic. A tooth sleuth is the most common means for testing sensitivity to bite. Each cusp should be individually assessed and pain upon release from a bite is highly indicative of a cuspal fracture. Occasionally a Q-Tip or other malleable materials are used to further evaluate sensitivity to chewing.

As with pulp testing, periradicular tests are a learned skill and with practice we all can improve. If you ever question 'What's SAP' by all means WhatsApp message me.

Regards,



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