

Asymptomatic Apical Periodontitis (ASAP) is inflammation and destruction of the apical periodontium due to an odontogenic problem. There are two features that distinguish it from symptomatic apical periodontitis:

1. No symptoms (i.e. no pain to percussion, palpation, or bite)
2. Definite apical radiolucency

It is not pathognomonic that a radiolucency close to an apex equates endodontic pathology. Which tooth is responsible for the apical lesion in the first Pre-Op PA above? It turns out neither as the apical lesion was metastatic leiomyosarcoma; this case was the subject of the March 2011 Newsletter. To ensure your diagnosis of ASAP is correct it is imperative to:

1. Have an updated medical, dental, and pain history
2. Perform pulp vitality and periradicular tests
3. Take at least two angled PAs and one bitewing of each potential endo case
4. If unsure, re-test the teeth, consider a CBCT or a referral

The second Pre-Op PA is of a typical ASAP case. The patient reported no problems with the tooth; the apical radiolucency was only discovered by happenstance. Pulp and periradicular testing confirmed the 16 had a necrotic pulp and ASAP. The medical history was unremarkable, there were no unusual clinical findings, and the approximation of the radiolucency to the buccal apices remained uniform regardless of the angle of the PA. Endodontic treatment was warranted and performed in a timely manner. A tooth with ASAP, by definition, is asymptomatic and thus can only be discovered with PAs, a CBCT, and occasionally PAN's or bitewings. It is reasonable to take annual PAs of heavily restored teeth that are asymptomatic. There is no benefit to delay treatment of a tooth with ASAP as the bacterial colony grows and becomes more resilient with time.

Time is an important factor if an asymptomatic tooth which was previously endodontically treated has radiolucency associated with an apex. If the RCT was recently performed and the apical lesion is small then it is prudent to consider annual PAs and clinical exams. If the radiolucency is large and the endodontic treatment was performed many years ago then further investigation is warranted; retreatment or surgery are distinct possibilities. A further complicating factor is that recent endodontic research indicates it can take many years for a radiolucent lesion to demonstrate frank evidence of healing. One must consider all of these factors when reviewing PAs of RCT teeth with apical lesions:

- Is the lesion active (i.e. getting larger over time but with no symptoms yet) and in need of treatment?
- Is the healing process remarkably slow and continued observation is prudent?
- Is the apical radiolucency of non-odontogenic origin and further investigation is required?

The last two images are of an asymptomatic 22 with ASAP. The PA is not particularly remarkable but the CBCT image revealed a significant apical lesion. The endodontic treatment was performed over ten years ago. The 22 has ASAP and it is prudent to consider endodontic treatment options.

ASAP's can be perplexing and no one professional can diagnose every lesion correctly. Patients may be reluctant to proceed with treatment because they mistakenly believe a lack of pain is tantamount to an absence of pathology. So if you are in doubt consider a CBCT or a referral to your local endodontist, preferably me ASAP SVP.

Regards,



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