

Cemental Tear Repair with Endoscope

The cemental tear, also considered a vertical root fracture due to occlusal overloading, aging or previous trauma, in this case left a cemental fragment still attached to the tooth.

Periopeak

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I saw this patient a couple of weeks ago. She didn't want an extraction of #9 so she came out from New York to undergo regenerative periodontal endoscopy (RPE) to try to save the tooth. She had other areas to treat as well, but this was interesting so I thought I would share and get feedback. She presented with a history of ortho and trauma, radiopaque area adjacent to apex, calcified canal, non-vital tooth and Class II mobility. But what in the world was going on subgingivally? I made a video clip when I endoscopically repaired this area (see it in the message board). I assumed it was just a cemental tear of sorts. It came off fairly easily and appeared to be like an egg shell. Very interesting. Patient on sub-antimicrobial dose doxycycline (SDD) a week before RPE with Emdogain.



Figs. 1 & 2: 10mm on mesial – all photos taken after RPE and videos, note minimal tissue trauma

Fig. 3: 9mm on facial – the egg shell coating wrapped around the tooth facial, mesial and palatal surfaces. Tooth is extruded. If we save it she will do something aesthetic here.

Fig. 4: 12mm mesial from the lingual

Fig. 5: 8mm straight lingual

It took me about 10 minutes to thoroughly clean this tooth with the aid of the periodontal endoscope, followed by coating the root with Emdogain from the apex to the CEJ. The patient reported no problems and no tissue shrinkage. She will come back to see me in six months for a re-evaluation.

[Posted: 3/3/2011]

Here are follow-up images from 10 months. I had her re-evaluated by two dentists in New York where she lives, they both concur that this tooth is solid and stable, Class I mobility. I am having one of them take digital photos of the tissue for me this month. I do not like the apparent cementum loose in the tissue, but I love the regeneration above it. I might have her come back at the one-year mark just to be sure I don't need to go back in. I feel I could get 2-3mm more bone in the IP. All probings are within normal limits with no bleeding on probing (BOP), except for a 5mm pocket described by her DDS on the ML of #9. It was a 12mm pocket before RPE. Both her dentists are thrilled and want more info.



Fig. 6: 10 months after RPE, nice bone fill occurring

[Posted: 5/25/2011]

Here are the one-year follow-up photos I took before removing the cementum lodged in the CT still visible in the X-ray posted above. I teased/cut it out with my laser and piezo diamond, while viewing with the endoscope. I recorded it – it was fun and somewhat challenging because of the location (away from the tooth root), and the strong attachment to the tissue. I then filled the remaining 5mm pocket on the ML with Emdogain. She will have a re-evaluation again in three months with her DDS back East, they can then discuss aesthetic options if she wants to pursue. I hope to see 2-3mm more bone by then on the X-ray. There is no mobility on this tooth and no recession created by the RPE procedure.



Fig. 7: Before was 10mm, after is 3mm with slight BOP

Fig. 8: Line angle was 8mm, now 3mm with slight BOP

Fig. 9: Before was 9mm – after is 2mm, no BOP

Fig. 10: Before was 12mm – after is still 5mm with slight BOP due to cementum stuck in CT – this is the area I accessed to retreat ■

Cemental Tear Repair

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