Reversing Periapical Lesions in Endodontically Treated Teeth

Ronald

In 1979, Ronald told me that he was having a lot of discomfort on his lower right side. A radiograph showed a large periapical lesion of his lower right second molar (#31) with furcation involvement (RS1). The tooth was opened to relieve his symptoms, and Ronald was referred to an endodontist for root canal therapy.

When Ronald returned to my office for a restoration, a post was cemented into the distal root, and the coronal portion was filled with composite. The tooth was restored with a crown.

Ronald returned six years later in 1985, complaining of sensitivity to chewing on the right side. A radiograph revealed that the periapical lesion had never healed and had even gotten worse (RS2). Ronald was referred back to his endodontist who reported to me that he could not do a better root canal treatment and that the tooth should be extracted.

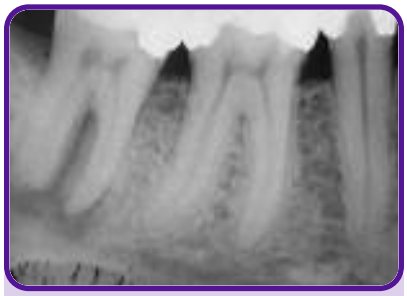

Figure RS1
Shows large periapical lesion with furcation involvement.

Perhaps this is standard practice, but our philosophy is different, because we are in the business of saving teeth, not pulling them. I informed Ronald that if he was willing, I would attempt to retreat the tooth and see if we could reverse the pathological process. I explained that we had been successful retreating root canals in the past, although there were no guarantees. He agreed, and I proceeded to try to ***save that tooth.***

Figure RS2
Six years after root canal treatment, the periapical lesion is worse.

The crown was removed, and I was able to get the post out and remove all the gutta percha. The canals were filled with TempCanal, temporary calcium hydroxide canal treatment paste. The TempCanal dressing was changed every month for three months and then at three month intervals. After nine months the periapical lesion was completely healed. Note the bone fill into the furcation area *(RS3)*. The canals were obturated with Pulpdent Root Canal Sealer using the Pressure Syringe technique. To restore the tooth, a new post was cemented, the tooth was rebuilt with composite, and a new crown was made *(RS4)*.

A radiograph taken in 1998, twelve years after retreatment of this tooth, shows long-term success *(RS5)*.

Figure RS3
Shows healing nine months after treatment with TempCanal.

Figure RS4
Shows canals obturated with Pulpdent Root Canal Sealer and new post and crown in place.

Figure RS5
Twelve year follow-up radiograph shows normal, healthy tooth.

There is no need to condemn a tooth with a periapical lesion, even if root canal therapy was previously performed and the periapical lesion persisted. Retreatment of failed root canals has proven to be quite successful.

My experience, however, is that these complications can be avoided by first healing periapical lesions with Pulpdent Paste, TempCanal or Multi-Cal before obturating the canal. This is the conservative approach and yields the best long term results, and it is being used by clinicians throughout the world.

In their research studies at the University of Geneva, Drs. Girard and Holz also found this to be true and in a seven year study obtained a 100% success rate by first treating periapical lesions with Pulpdent Paste.[1] We are showing the same results throughout this book.

1 Girard C, Holtz J, Controles a court et a long termes du traitement de la Categorie IV des pulpopathies a l'aide d'hydroxyde de calcium. Rev Mens Suisse Odonto-Stomatol 1985;95:169-182.