



---

# **Obstacles to Dental Healing**

## **Part II**

### **Root Filled Teeth: Their Cause, Consequences, Prevention and Attempts to Revise them**

**by Frank Spoden, Dental Surgeon  
Germany**



In common terms teeth are regarded as a very hard but dead form of tissue. Various activities are carried out using this organ: biting through threads, cracking nuts, opening bottle caps, and many more.

On contrary the teeth are not dead. Dental enamel is one of the hardest tissues in the body, but the tooth as a whole is one of the organs of the body which is the most sensitive to touch. Certainly the tactile threshold of a tooth varies greatly, but it is considerably less than one millimeter partly less than one tenth of a millimeter. Every tooth can move individually, be impressed into the dental alveolus and thus has extremely good tactile sensitivity.

Teeth are capable of feeling these sensations through the internal dental nerves and the external periodontium.

These internal dental nerves are affected by various influences on the teeth. Every trauma, every bit of damage to or stimulation of the teeth results in a reaction from the nerves. Every filling, every impact or knock, every above-average demand made on the teeth adds to the total.

In dental medicine we differentiate between the biological and the actual age of a tooth. The biological age is equal to that of the person whose tooth it is; the actual age is the total of all the stimuli received by the tooth and everything that influences it. When a child reaches the age of about six, a “six year” molar – i.e. the first large back tooth – joins the milk teeth which are still present. Frequently this tooth is not regarded as permanent but as one

of the milk teeth, and often only limited efforts are made to keep it healthy.

The enamel on this freshly erupted tooth is not yet hardened, and often oral hygiene is insufficient. This provides an obvious explanation as to why this tooth is one of the first permanent teeth to be subjected to powerful caries attacks.

Caries is an infection involving a number of different bacteria which damage the teeth. These convert the remains of food into acids which decalcify the enamel and thus smooth the way for bacteria to enter the teeth.

The deeper the decalcification and the ingress of the bacteria, the greater the damage to the dental nerve.

At this point the actual age of the pulp (the dental nerve) determines its ability to react to this bacterial attack. The more the dental nerve is already damaged and its ability to react is weakened, the more likely it is that there will be irreversible damage to the nerve, leading eventually to its death and the consequent decomposition of the protein.

As the dental nerve is situated within the hard shell of the tooth, on the one hand it is very difficult to assess the condition of the fine threads and its state can only be assessed from indices. On the other hand, there is congestion as a result of the increased inward flow of arterial blood and a reduced outward flow of blood. In the final stages we talk of a “haemorrhagic infarction“. In this particular organ, the nerve is finally destroyed by the body itself due to the increased flow of blood.

As the dental nerve cannot be examined visually, the dentist can only use different methods of provocation: e.g. cold, heat and electrical stimulus. However, with a multirouted tooth this provocation must always be carried out on each of the roots, because it is possible for one root pulp still to be living whilst the others have already become necrotic. As a result, the prognosis for the whole nerve has to be considered.

As a rule, if the pain is throbbing and pulsating, longlasting and continuing beyond the duration of the stimulation, occurring spontaneously and at first localised, but later radiating from the site, one is dealing with irreversible pulpitis: i.e. the dental nerve is infected so much and cannot survive. If the tooth reacts to tapping with pain, if the cold test continues to have an effect for what may be a long time afterwards, if the tooth reacts to heat for even longer, if the x-ray shows enlargement of the periodontal ligament space and if there is a possibility of an opening in the pulp, the course of treatment is relatively clear: remove the nerve.

Especially here many problems are involved.

On the one hand, access to the root canals is difficult (each root has not only one but possibly two root canals: see the molars of the lower jaw in the anterior mesial root); on the other hand, the root anatomy is extremely complicated (see Fig. 1 and Fig. 2).

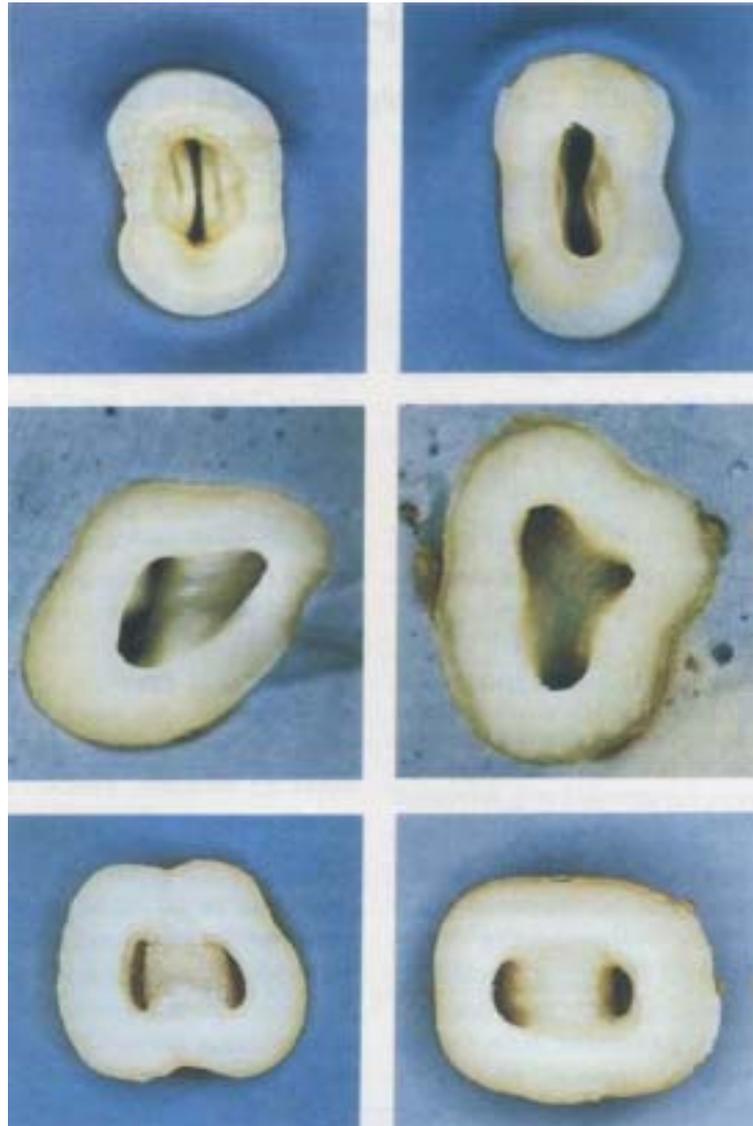
The dental nerve is not a “carrot“ which is hidden in the tooth and just needs to be pulled out of the root, so that the inside is clean; instead it

is more like a tree stripped of its leaves and turned upside down. Many of the lateral canals cannot be reached with the normal root canal treatment techniques, as these are mostly carried out using rigid instruments (e.g. reamers) which prevent extreme bending. Improvements in materials, e.g. nickel-titanium instruments, have allowed a considerable leap forward, but the weak point of treating the lateral canals still remains.

### **Outstanding preparation is important**

If a dental nerve is dead, the tissue decays. The protein decomposition results in the production of thioether and mercaptan. The body has no mechanism of its own to deal with this problem, for localised death is a situation for which the body has no solution. The most important thing is to reduce the number of bacteria and clean out the canals, and this *per se* is what decides whether the treatment is successful or not. However, endodontology (root canal treatment) is always only an attempt to preserve a dead tooth, particularly because enamel and dentine have a high level of organic content which will no longer be provided for by way of direct transport or diffusion once the nerve has been extracted. As a result, the tooth ages and gets brittle and the surface changes, so that sooner or later the body reacts by rejecting its own tooth as if it were a foreign body.

A better result can only be achieved by using a WATERLASE™ root canal process. This involves a highly specialised dental laser which



*Fig. 1: Complicated anatomical access to the root canals. Photos of extracted teeth.*



*Fig. 2: Root configurations according to MEYER 1955*

removes the tissue to the greatest extent possible and also greatly reduces the number of bacteria in the root canal. Also it is helpful to insert a temporary filling with ARTHROKEHLAN A into the canal for a maximum of 24 hours in order to reduce the number of apical bacteria.

Without this treatment the poisons can escape unhindered from the tip of the root and this can lead to a drastic drop in pH. This favours the massive development of more bacteria which are normally only required after death of the whole organism but not in case of a localised trauma.

In this situation the body is often under excess strain. It attempts to encapsulate the diseased area by forming a granuloma, and this is the first stage in the formation of a massive disruptive field. Certainly in most cases the energy flow on one meridian has already been disrupted by the diseased tooth, but now the body begins to react violently against it (see Fig. 3).



Fig. 3: Dental granuloma

A further problem is seen particularly at the apex of the tooth, at the tip of the root. Here one speaks of a “delta” – a description

taken from the mouth of a river which is similarly shaped (see Fig. 4).



Fig. 4: “Delta“ at the apex of the dental root

Frequently conventional methods fail in dealing with these lower root areas, so resection of the root apex and cleaning the whole bone marrow cavity is the only possible treatment. Here too WATERLASE™ can be used to cut off the root apex and to considerably reduce the number of bacteria in the inflamed bone marrow cavity. This often solves the problem. As a rule this form of treatment requires comprehensive knowledge of dental surgery, since the roots in the upper jaw are extremely close to the bone marrow cavity and it is easy to make an opening into the bone marrow cavity: introducing foreign bodies can have extremely unpleasant consequences.

In the lower jaw the lateral teeth are close to the alveolar canal (*Canalis alveolares*) in which the nerve, artery and vein are all situated. It is therefore easy to cause irreversible damage with possibly considerable consequences.

For post-operative care, use ALKALA T tablets to improve the pH value, CITROKEHL tablets to improve the cell metabolism, and MUCOKEHL 5X drops to improve the healing of the wound.

In addition to conventional treatment there are many other types of therapy which promise success. For example, I would like to mention lasers.

We work with an Nd-YAG laser to reduce the number of bacteria in the region of the canal, the dentine of the canal wall and the periradicular structures, with very positive and hopeful results. But this form of therapy has not yet been finally tested in controlled long-term studies. The results from our practice show that the treatment offers great advantages. Without medication, the tooth can be sedated in a considerably shorter time.

## Summary

All these forms of therapy should not blind us to the fact that a root-filled tooth is dead and remains dead. Later changes – embrittlements – and their consequences are the rule and the result. Changes in the tooth as a result of embrittlement lead to a change in the surface and thus to the reaction of rejection as if it were a foreign body.

The question is whether teeth which have undergone this change can and should be preserved. Here one must give an unambiguous opinion on the future functionality. All the holistic treatment methods which we are familiar with end up by extracting the dead tooth. But how is the function to be perfectly reconstructed at a later date? Ignoring this question frequently leads to functional problems including TMJ (temporomandibular joint) syndrome, neuritis and trigeminal neuralgia, tinnitus, Menière’s disease and many other



chronic disorders of the head and jaw which are accompanied by functional disorders in the maxillofacial area.

Only perfect prophylaxis of the tooth and meridian system can avoid a dead root and thus prevent an obstacle to healing. Our present level of knowledge about the origin of caries and periodontopathogens is so widely ranged that the chances of keeping teeth free of caries are very good.

A great deal of patients who consult a holistic surgery, have one or more root-filled teeth and/or have undergone inadequate prosthetic surgery. When planning a course of treatment one must often consider whether these are strategically important teeth and whether they can possibly be preserved by revision.

For example, this revision can be done by removing the existing root

filling. Furthermore, it will be necessary to improve the preparation of the root canal and carry out full laser treatment. The root lumen is filled with ARTHROKEHLAN A and the canal is sealed off temporarily for at least 2 days. It is very important is to explain all this in advance to the patient, because this form of therapy is frequently so successful that the ARTHROKEHLAN A filling may lead to an initial deterioration, with large quantities of pus being discharged from the root canal. This reaction of the body – the production of pus – is often stigmatised and is wrongly interpreted by the patient ; but it is in fact a positive response, as many cell wall deficient forms are remodulated and restored to forms with cell walls which then can be identified by the body.

The prognosis for these teeth is extremely good and they can be

preserved for a number of years. But also here one must consider whether the teeth are an obstacle to healing.

Therefore the question arises again as to whether a root-filled tooth can be preserved and is worth preserving. Each case must be decided individually. Many secondary forms of treatment are possible and necessary: My first choice would be acupuncture, homeopathy, laser treatment and neural therapy according to HUNEKE. There are still many other possibilities, and we must try to find the right way.

*First published in the German language in the SANUM-POST magazine (66,2004)*

© Copyright 2004, Semmelweis-Institut  
27318 Hoya, Germany

**All Rights Reserved**