More and more patients are undergoing elective procedures to improve their smiles. Porcelain veneers and bleaching treatments are now being sold by many dentists who have updated their skills and are helping out their patients unhappy with the position or colour of their teeth. There seems to have been a rise in the number of patients presenting with acute sensitivity and pain following these procedures.

Patients are often angered and dismayed by the fact that their once intact teeth are hurting, which is why measures must be taken to inform a patient before treatment of any possible problems, as well as taking steps to avoid problems during preparation.

The first step
First as always comes diagnosis and consent. A patient should always be warned that they are undergoing an elective procedure, and that any procedure involving the preparation of a tooth can cause inflammation. If all goes well, this will be transient and should settle by itself.

Radiographs and models should be taken to assess tooth position and preparation with regards to proximity to the pulp. Ideally, if teeth are poorly aligned, the both orthodontic and endodontic options should be discussed.

Many of the leading cosmetic practices now have close relationships with orthodontists. Aligning teeth makes the veneers easier to place and gives a superior cosmetic result. If the patient does not want to undergo orthodontics, they can consider elective endodontics so that the tooth can be further reduced and realigned.

The other options
Once a patient has agreed to veneers, it’s worth keeping in mind what are the worse things we can do to teeth:

Take a perfect tooth, and then remove all the enamel with a high-speed bur. If the bur is blunt or there is not enough water, the tooth will heat up dramatically causing severe pulpal inflammation and possible pulp death. Using brand new burs and plenty of water will keep all the teeth moist and cool.

If there are multiple preps being done at the same time, the first teeth can desiccate. Moist gauze can be placed over the preparations.

Try not to over prepare teeth. The best preps are in enamel and this ensures a better bond. Trial preps on a model, following the methods used by Dr Gurel, will ensure minimal but adequate preparation.

Temporaries tend to be spot welded to ensure easy removal, but may also lead to bacterial leakage. If the tooth has already been traumatised by the preparation then bacterial leakage at this stage can cause real sensitivity and pain. The bacteria can penetrate the freshly opened dentinal tubules in the heavily prepared areas, especially if there is a good shoulder preparation at the neck of a tooth.
Good, well-fitting, temporary veneers therefore are essential, as is protecting the teeth before the impressions are taken. A fourth generation dentin bond like Optibond SL by Kerr, will help seal the tubules, cutting down on the potential for leakage.

Fitting the veneers

The next problem is actually fitting the veneers. Taking off temporaries and etching a tooth can exacerbate an already sensitive tooth and can be excruciating. If the tooth has been well protected beforehand this should not be a problem.

It is inevitable that teeth will be sensitive to cold stimuli following a procedure and this should be closely monitored. Often the patient guides us and when teeth just aren’t settling, a decision has to be made to denervate a tooth.

Veneers can give a beautiful result but are really a very complex restoration that has to be done with great care so that healthy teeth do not need to be root treated later.

About the author

Dr Michael Sultan
BDS MSc DFO

is a specialist in endodontics and the clinical director of Endocarp. Michael qualified at Bristol University in 1986 and worked as a general dental practitioner for five years before commencing specialist studies at Guy’s Hospital in London. He completed his MSc and is an endodontist in 1993 and worked as an in-house endodontist in various practices before setting up on his own at London’s Harley Street in 2000. He was admitted on to the specialist register in endodontics in 1999 and has lectured extensively to postgraduate dental groups as well as lecturing on endodontic courses at the Eastman Dental Institute at University of London. He has been involved with numerous dental groups and has been chairman of the Alpha Omega dental fraternity. In 2008, he became clinical director of Endocarp, a group of specialist practices. Dr Michael Sultan can be contacted for advice regarding patients or any issues raised in his articles, on michael@endopro.co.uk.