

Editor's Desk

Esthetic Endodontics

Esthetic dentistry became a part of the mainstream dentistry gradually and it is playing an important role in dental work now.

Stress on esthetics invaded endodontics too, but it has brought serious set back in the progress of this science. It is satisfying to see beautiful radiographs with nice tapered obturation, deep shape of the root canal, etc. How convenient it is to forget that success of root canal treatment does not depend primarily on the beautiful shape depicted on the radiograph, but on how clean and disinfected the canals were made prior to the obturation!



Esthetic dentistry is 'want' based dentistry in many cases and the dentist is not dealing with an infected area. But in endodontics, we have to eliminate infection for alleviating symptoms, for healing to start and progress. The most critical area for cleaning and disinfection is the apical third.

More than three decades of scientific evidence tells us that root canal sizes vary widely and they have to be enlarged more than their original size for cleaning and disinfection. Baugh and Wallace, in a review of the literature on the Role of Apical Instrumentation in Root Canal Treatment (J Endod 2005;31:333-40), pointed out that the apical constriction and the 3 to 4 mm of the canal coronal to it are larger than the size advocated by some manufacturers. They concluded that because the apical dimensions of root canals range from very large to very small, we should seek instruments and techniques that can help the clinician determine when instrumentation to the correct apical size has been achieved.

But many of us are choosing to stop apical instrumentation at much smaller sizes, sizes that are even smaller than the shorter diameter of oval canal.

On the other hand, the cervical region is being stripped off the critical tooth material. This is the area that acts as the fulcrum during masticatory movements. Higher incidence of patients coming back with horizontal fracture of root canal treated teeth, with the separated fabricated crown and tooth structure inside it, is baffling dentists. Isn't it too obvious that it is an iatrogenic tragedy?

An erroneous notion prevails that lack of apical cleaning can be set right by irrigating solution. Sodium hypochlorite can be effective only when it comes in contact with the bacteria. Uninstrumented canal harbors a thick layer of infected material, which the hypochlorite cannot penetrate to kill the bacteria in the deeper layers and inside the dentinal tubules. Moreover, there is abundance evidence in literature that better microbial removal and more effective irrigation occurs when canals are instrumented to larger apical sizes (J Endod 1977;3:394-98, J Endod 1983;9:475-79, J Endod 2000;26:751-55).

Esthetic endodontics is good, provided we are tackling the main problem, the infection. Time has come for us to decide whether we are contented with the beautiful radiographs of root canal obturations and not bothered about the patients' suffering from lack of healing or to start making efforts to really clean and disinfect those critical areas in the apical third and give importance to the 'working width' of the root canal!

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