



Dr. Anish Naware

Dr. Anish Naware, is a dedicated, focused clinician as an Endodontist for the past 37 years in Mumbai, Educator for the past 25 years & national & international speaker of repute. He is recipient of four awards towards the contribution to making Modern Endodontics more popular in the interior parts of India. He is Post - Graduate in Conservative Dentistry and Endodontics (1985) and founder of Integrated Endodontic Centre, Thane (Clinical endodontics & weekend continuing dental education programs), first of its kind in India (Estd. Yr. 2000). He has introduced Modern Endodontics and tapered preparations in India. He has conducted more than 450 hands-on courses for 6000 dental surgeons all over India and is a Keynote Speaker at many national & international level conferences. He has lectured and conducted hands on in Malayasia, UAE, Oman, Sri Lanka & UK. He is recipient of 'Thane Gaurav Award' 2006 from the Mayor of Thane and 'Thane Manbindu Award' 2007. He has worked as a Microendodontist in Breach Candy Hospital - Mumbai 2003 to 2008. And worked as a chief Consultant at Bhatia Hospital - Mumbai as a Microendodontist from 2011 to 2016. He is the Executive Editor for "Famdent Endodont" Year 2013 - 19. He has 2 patented designs on endo instruments to his credit and recipient of Bite - In Award for Best Clinician - year 2016 and "DDI Aarogya Sanman" Year 2021 - Dr. R. Ahmed Award.

Ultimate aim of obturation is to get a hermetic seal at the apex and other portals of exit. Cleaning and shaping is paramount in endodontics but obturation plays an important role in the longevity of the endodontic therapy. Three dimensional obturation is the need of the hour. Materials used mainly are gutta percha and sealant. Role of gutta percha is to seal the apex and sealant is used to fill up the micro spaces around the gutta percha and other lateral canals.

With introduction of tapered instrument, cleaning and shaping has become more effective. Need for tapered gutta percha [non standardized] is essential to match the tapered shaping. In the year 1984 we all were very happy with the zinc oxide eugenol sealant with gutta percha [2% taper].

We used this protocol of zinc oxide eugenol and gutta-percha combination for practically 15 years without any option. As we could see the prognosis of endodontics was getting questioned, longevity of endodontic therapy was debatable.



Fig. 1 Non-standardized gutta percha cones.

Zinc oxide eugenol sealant is water soluble, degradable in nature. Resin sealant [epoxy resin] is biocompatible, non-degradable in water. We used this sealant from the year 2000 to 2020 regularly. Clinically epoxy resin has shown excellent results. Sealant is an adjunct material for obturation. Gutta percha is the main material of choice for obturation.

But for an ideal sealant, antibacterial activity is always preferred over other properties.

Ideal Requirements Of A Sealant Are As Follows:

1. Easy to mix
2. Easy to handle
3. Primary and secondary setting time
4. Radiopaque
5. Biocompatible
6. Non-degradable
7. Insoluble in water
8. Antibacterial action

Zinc oxide eugenol sealant is fulfilling all the requirements except it is degradable and soluble in water. This limitation made zinc oxide eugenol sealant less popular. Zinc oxide eugenol sealant gives post operative pain due to free eugenol present in it. Epoxy resin sealant replaced zinc oxide eugenol sealant because it was non-degradable and insoluble in water. But epoxy resin sealant has no antibacterial action on periapical infection. Though epoxy resin is a successful sealant, clinicians started looking for

a sealant which is non-degradable and insoluble in water but which also has anti-bacterial action giving them better prognosis in chronic lesions.

Mineral Trioxide Aggregate was introduced in India in the year 1996, MTA is very useful to treat clinical situations like perforations, pulp capping, wide apical foramen, internal resorption, external resorption and retroseal apicoectomy.

But due to powder and liquid form of MTA, clinicians could not use this combination as a sealant.

Due to the presence of three ions in MTA, healing effect on surrounding tissues is excellent. MTA is non degradable and insoluble in water. Longevity of MTA is proved to be long lasting and lifelong. Packable MTA which was available in India since 1996, is not economical for Indian clinics. Introduction of bioceramic sealant in the year 2021 in India is emerging as an ideal sealant for obturation. MTA bioceramic sealant is easy to handle, non degradable, insoluble in water and antibacterial in action.

Under the “Make in India” mindset, now packable MTA combined with bioceramic sealant is made available by Prime Dental, India which is very economical. Bioceramic sealants become very hard after setting in the canal due to combination of silica and three ions. Retreatment or removal of sealant becomes difficult. At this point one should make first time endotherapy as a final last attempt. Every root canal treatment should be first and long lasting treatment if done methodically. So the debate on retreatment is invalid if the first attempt is successful but that does not mean that success of endodontic therapy depends only on sealant. Proper protocol of cleaning and shaping with combination of non-standardized guttapercha with bioceramic sealant will improve the future of endodontics.

New mindset of overfilling canals with bioceramic sealant gives better prognosis. Puff at the apex is the acknowledgement given by the tooth to the clinician that you have reached the apex, shaped the apex three dimensionally and obturated the apex three dimensionally.

Conclusion

Root canal treatment should be a lifelong treatment with a predictable prognosis. One should not think of second attempt for that particular tooth. To achieve phenomenal success in endodontic therapy, one needs to choose newer materials like non standardized guttapercha cones and bioceramic sealant. Non standardized guttapercha will deform in the irregular apex to achieve hermetic seal and bioceramic sealant will flow in micro spaces which will help achieve hermetic seal due to non degradable property and anti bacterial action will help in healing.



Fig. 2 Bioceramic sealant-new era in obturation!