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Magnification in Endodontics: The Third Eye

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Editorial

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Endodontics has seen some glorious years in the recent times. This has been due to considerable increase in the success rate, owing to both increase knowledge of the anatomy of root canal system as well as availability of high end armamentarium for dealing with the complex cases.

When we talk about the equipment, perhaps, the biggest boon to Endodontics has been the use of dental operating microscope, which has totally revolutionized the entire Endodontics. The proverb, "if you can see better, you can treat better" was the total idea behind the introduction of this powerful tool in dental practice.

The history dates back to 1980's when Dr Apotheker introduced the Dental Operating Microscope and coined the term 'Micro dentistry' [1]. The following years saw immense improvements in the design and efficiency of the scopes, the credit of which goes to eminent professionals like Gary Carr, Kim Sungcuk, Pecora, Rubinstein, Apotheker and Jako [2,3].

As the use of Microscope has increased world-wide amongst dental professionals, the cases, which were once considered of having guarded prognosis , are being taken up and treated successfully, further increasing the success rate of Endodontics, which has proven to be quite beneficiary for the patients.

Along this journey of Microscope, the advent of new micro-instruments has happened, which facilitate the working under magnification. This all has made a gradual transition in work culture in dentistry from Macro-dentistry to Micro-dentistry.

For a restorative dentist as well as an Endodontist, the dental operating microscope offers a large number of benefits such as: improved diagnosis especially in case of cracked teeth; better visualization of pulp chamber, root canal orifices and calcifications present; identification of complex root canal systems; effective cleaning and shaping and its visualization thereafter; improved control over obturation of root canal system; superior management of open apex cases and those with internal resorption; predictable sealing of perforations and identification of missed canals, fractured instrument etc. which are common in failed Endodontic cases and are referred to the specialists for retreatment [4-6].

Microsurgical Endodontics is another sub-specialization which is emerging profoundly because of all the benefits one can draw from enhanced illumination and magnification of the surgical site such as smaller incisions and flap designs, specifically defined osteotomy sites, minimal invasive approach to pathological tissue, efficient root end resection and a far effective and accurate placement of root end filling material [7,8].

The use of microscopes in dentistry along with the micro-instruments have expanded the horizons of dentistry and taken it to a next level of sophistication. Parallel to this one must understand and realize that the equipment itself can never replace the basic knowledge of the subject and the clinical skill involved in handling the cases, which comes with experience. Need of the hour is to strike a balance between technological advancement and clinical acumen to achieve the highest standard of care in dental profession.

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