

When implant placement substitutes root canal treatment: Food for thought!

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ABSTRACT

In the near future, Endodontics will no longer be used to “save” teeth contaminated by bacteria and by-products. It will be increasingly indicated to repair damage caused by dental trauma, such as luxation, displacement, intrusion, extrusion, reimplantation, fracture of the crown and root, as well as internal and external root resorption. Endodontists will be more often required to perform apical endodontic surgery of teeth of which crown hampers canal, root perforation and injury treatment. Furthermore, they will consolidate their position as consultants in matters related to the dental pulp, periapical tissue,

root resorption and dental trauma, all of which the endodontist should master. In the context of interdisciplinary relationships, Endodontics has been relocated as the specialty upholding all the others, the one which is no longer used as the last resource to “save” a tooth, but to strengthen teeth subjected to restoration and rehabilitation procedures. Osseointegrated implants satisfactorily replace nearly lost teeth of which prognosis are dubious or unsatisfactory. The era of therapeutic attempts is coming to an end in the field of Endodontics!

Keywords: Endodontics. Dental traumatology. Root resorption.

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Introduction

After five years, all information in the field of biomedicine, including Dentistry and Medicine,² will only have historical value. In the exact sciences, however, this period might be no longer than six months. An undergraduate degree in Dentistry is already outdated by the time students graduate. Imagine clinicians with a 10-year degree: ongoing study is paramount.

Knowledge changes and is updated at an increasingly rapid pace. In this context, excess information leads to significant psychological issues such as stress, hyperactivity, accelerated thought syndrome and panic disorder, all of which might result in depression. In general, excess information causes us to miss opportunities and lose the ability to think things over. For instance: How has Endodontics developed as a specialty, and how has it been related to other Dental specialties? The present study was conducted with a view to thinking this issue over.

Endodontics now and in the last century: A change in perspectives

From the 90s on, Implantodontics not only caused a revolution in the field of Dentistry, but completely transformed oral rehabilitation, particularly with regard to tooth loss. Before that, natural teeth were preserved up to their utmost biological limit which was the aim of endodontic practice. Endodontics was the “salvation” after which the only choice was tooth loss. In order to replace a lost tooth, two neighboring teeth would have their structure significantly lost, which allowed the specialist in Endodontics to carry out a number of procedures that, despite unsatisfactory prognosis, had some chance of success. Should the tooth be lost anyway in the future, at least there was an attempt for which both patient and the oral rehabilitation specialist were thankful.

Nevertheless, professional relationships have become increasingly competitive and demanding every year, and the specialist in Endodontics should no longer occupy his former position: he is now liable for the unsuccessful attempts and potential tooth loss. The burden of responsibility is put on his shoulders by the oral rehabilitation specialist and the patient.

Specialists in Endodontics no longer try to save nearly lost teeth with an unfavorable prognosis as they used to do up to the 90s. Cases with an unfavorable prognosis, in need of long follow-up periods

or with a potential risk of further complications now require teeth to be extracted and replaced by osseointegrated implants.

The end of the line for rehabilitation treatment planning is no longer tooth extraction and fixed denture based on wear of neighboring teeth. Today the end of the line for rehabilitation treatment planning is replacing a damaged tooth by an osseointegrated implant of which clinical and biological outcomes are excellent, particularly in terms of esthetics, function and longevity.

To my view, the specialist in Endodontics should have treatment plan based on the most satisfactory prognosis possible in terms of endodontic therapy and longevity of endodontically treated teeth remaining in function within a rehabilitation context. Take the following as examples: Cases of internal resorption which weakens the root structure and provides potential risks of fracture after endodontic treatment; or cases in which the resorption process has perforated the outer surface of the affected tooth¹ both require extraction and further osseointegrated implant placement.

Many endodontically treated teeth might be kept in function, but with some risk of fracture; however, in cases of rehabilitation treatment, both patients and specialists are not willing to take the risk and are more likely to opt for the safety offered by implants.

Another example is that of teeth subjected to inappropriate endodontic treatment, with chronic periapical lesion, damaged crown or crown replaced by metallic posts. What is the prognosis? What is retreatment longevity? How weak is the root subjected to oral rehabilitation? Is chronic periapical lesion likely to recede? Will apical endodontic surgery be necessary? The line of reasoning in rehabilitation treatment planning will generally be: “One had better extract the damaged tooth and replace it by an osseointegrated implant than take the risk!” Hardly anyone accepts an attempt made at dental offices and clinics rather than at colleges and courses!

Prospects for Endodontics : What should be given priority to?

The prospects for Endodontics are related to acting in cases of satisfactory or excellent prognosis, only: Endodontics is no longer allowed to make an attempt as if it were the end of the line for a tooth. Dental implants are the last option, instead!



We have progressively had lower tooth cavity rates, and the number of primary cases of endodontic therapy due to tooth cavity has significantly decreased. In addition to retreatment, endodontic therapy has been increasingly employed in cases of aseptic pulp necrosis induced by dental trauma, whether associated with enamel fracture and crack.³

Moreover, the specialist in Endodontics has often been required for root canal treatment necessary for periodontal and implant surgery, as well as for procedures for removal of lesion and apical endodontic surgery required in cases of teeth with severe periodontal damage after oral rehabilitation is complete.

In other words: The specialist in Endodontics should go on investing time and money in mastering issues related to dental trauma and resorption, as well as apical endodontic and other surgical procedures.¹

Meanwhile, Endodontics will stop dealing with tooth structure contaminated by bacteria and their by-products, only. Dental trauma and associated resorption will increasingly offer the opportunity for endodontic approaches to be carried out; and, within the next few years, the specialist in Endodontics will be no longer working with root canal retreatment as a result of a time when tooth cavity prevailed as the major cause of pulp necrosis, periapical lesion and apical resorption.

Final considerations

1st) In the near future, Endodontics will no longer be used to “save” teeth contaminated by bacteria and by-products. It will be increasingly indicated to repair damage caused by dental trauma, such as luxation, displacement, intrusion, extrusion, reimplantation, fracture of the crown and root, as well as internal and external root resorption.

2nd) Endodontists will be more often required to perform apical endodontic surgery of teeth of which crown hampers canal, root perforation and root injury treatment.

3rd) Endodontists will consolidate their position as consultants in matters related to the dental pulp, periapical tissue, root resorption and dental trauma, all of which the endodontist should master.

4th) In the context of interdisciplinary relationships, Endodontics has been relocated as the specialty upholding all the others, the one which is no longer used as the last resource to “save” a tooth, but to strengthen teeth subjected to restoration and rehabilitation procedures.

5th) Endodontics is no longer the end of the line for teeth remaining in function: Specialists in Endodontics should only treat cases of satisfactory or excellent prognosis. Osseointegrated implants satisfactorily replace nearly lost teeth of which prognosis are dubious or unsatisfactory. The era of therapeutic attempts in the endodontic office coming to an end!

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