Guest editorial

Endodontics based on scientific evidence: expert opinion *versus* scientific view

Since some time we have dedicated great part of our efforts to understand better the complexity of the matter “Endodontics Based on Scientific Evidence”.

This exercise has been very hard and sometimes has led us to reflect about the own limitations of the science and research.

Much of what we have been doing in our clinical practice is not scientifically supported yet, however, our success rates associated with these procedures are encouraging.

So, the question that has been often asked us about this matter is “Why”?

Why a procedure that has been performed in a similar manner by several specialists or not around the world has its success clinically but not scientifically supported?

Why some of these procedures we have been doing for a long time with a great clinical success index, still don´t have the scientific scrutiny?

Most likely, one of the answers to these questions is related to the limitations imposed by the own difficulties in conducting clinical trials.

A crucial example of this is the paper of Torabinejad *et al.* [1] where the authors performed a comprehensive systematic review of the literature analyzing the levels of scientific evidence related to the results of nonsurgical endodontic treatments. For this purpose they performed a research in three databases (Medline, Embase and Cochrane Library) and in the references of three chapters of textbooks about the matter. Altogether, were analyzed 6,024 papers and only 306 were included in the study considering different criteria of inclusion and exclusion. After, these 306 chosen articles for a more detailed analysis of the methodologies employed were classified into different categories considering the levels of evidence. After this phase, the authors exposed the following classification:

- Level of Evidence I (gold standard): 6 studies (randomized clinical trials);
- Level of Evidence II: 26 studies (12 randomized clinical trials of low quality and 14 cohort studies);
- Level of Evidence III: 13 studies (5 case controls and 8 cross sectional studies);
- Level of evidence IV: 124 studies (4 cohort studies of low quality, 5 case controls of low quality, 73 case series and 42 epidemiological studies);
- Level of Evidence 5: 137 studies (114 case reports, 18 papers of expert opinions, 4 literature reviews and 1 meta-analysis).

Considering the analysis of 6024 studies about success and failure of conventional endodontic treatments and the classification previously exposed, how many studies can actually be considered or consulted as auxiliary to our clinical decisions since this is the main purpose of development and evolution of the Endodontics Based on Scientific Evidence philosophy?

Related to this doubt, we still see another negative aspect about the matter...

In some schools, education centers and places around the world, the “Expert Opinion" still wants to be only and exclusively the “Expert Opinion” and the “Scientific View” still wants to be only and exclusively the “Scientific View”.

Most likely the two ways are wrong.

The clinical skepticism related to the science and research is highly detrimental, as it contributes significantly to the persistence of clinical practice based on authority and empiricism.

On the other hand, the scientific skepticism related to the clinical evidence is also highly detrimental, for it continues to encourage in an increasingly earlier way the formation of strictly laboratory scientists with no clinical experience.

While there is the evident radicalism between both current philosophies, we will hardly achieve the clinical and scientific maturity necessary for us to really perform our clinical practice safely.

Reference

1. Torabinejad M, Kutsenko D, Machnick TK, Ismail A, Newton CW. Levels of evidence for the outcome of nonsurgical endodontic treatment. J Endod. 2005;31:637-46.

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