Considerations on the use of computed tomography in Endodontics

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Is the CT scan really a high cost for the patient, or is there a resistance on the part of most professionals to indicate it? Paradigms have already been broken with regard to the radiation dose. In many universities in the USA, the patient does not wear a lead apron during the exam because the dose is so small. The reason for this is that the exam used for Endodontics has some differences in relation to medical tomography. The acquisition is cone-shaped, hence the name cone-beam CT. In addition, the exam covers a small FOV (field of view), i.e., it does not capture images of the entire skull, but only of an area a little larger than a periapical radiograph. This makes this examination extremely safe with respect to radiation dose.

According to the American Endodontic Association and the American Association of Oral Radiology, computed tomography is indicated whenever the association of conventional radiographic exams and clinical examination do not clarify the diagnosis. But I would like to propose a question: How do you classify your cases as easy or difficult? By means of the periapical radiograph, right? But does it give you precision with respect to anatomical information? Does it show the curvatures exactly? Obviously not. So why do other specialties request tomography for simpler procedures, and why shouldn't Endodontics request it for anatomical study and help in diagnosis? For implants, it is usual to require tomography, as it offers safety to the patient, while for Endodontics it has become an additional cost. Remember that studies show that when a canal is forgotten and not treated, the risk of failure is 98%.

Furthermore, clinical studies show that CT scan is twice as likely to detect a periapical lesion than periapical radiography. Furthermore, clinical studies show that CT is twice as likely to detect a periapical lesion as periapical radiography. Studies published in leading endodontic journals show us that clinical decision-making changes more than 50% of the time when cases are planned based on CT images. So why not use it? Sometimes endodontic treatments are done without the minimum of certainty of a favorable outcome. Sometimes endodontic treatments are done without the slightest certainty of a favorable outcome. The patient pays for it, and months later the tooth is lost. Remembering that Endodontics, along with Periodontics, is the area that provides the foundation for oral rehabilitations. There are no longer any plausible reasons for not requesting CT scans in endodontics. Obviously, soon after treatment, exposures only to show a filled lateral canal should be avoided. However, the exam is recognized as the gold standard for diagnosis and follow-up of cases, to confirm healing and repair.

So, the question that remains is: will BRL 200 really be a cost when there are so many benefits and more assertive clinical decisions? Or is it the dentist, endodontist, who, for personal reasons, "thinks" that the exam is expensive? Let's think about offering the best to our patients and about health promotion. Tomorrow, we may be the patients. Would you like to be introduced to this examination?

Best regards!

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