Editorial

With this December issue, RSBO completes its eighth year and the objectives established for this year were met. The offer and the maintenance of RSBO in English were really the Journal's great accomplishment, and undoubtedly, they will help the Journal in the process of propagation of the papers already published.

The increase of international studies reception already indicates that the Journal translation to English and the insertion of new foreign members in the Editorial Board reached positive results. The search for new databases briefly explains the goals established by the Editorial Board for the Journal in the following year.

The maintenance of rev@odonto project of the Service of Dentistry Documentation of the Dentistry School of the University of Sao Paulo is also planned for 2012, once this aforementioned database allowed an easy access to the papers published by RSBO and consequently increases the Journal visibility.

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Guest editorial

Rotary instrumentation during graduation

To accomplish endodontic treatment, most of the time is consumed in root canal preparation phase. This phase can take from minutes to hours to be executed, according to both the professional's experience and the tooth's morphological condition. From the introduction of NiTi (nickel and titanium) alloy in Endodontics by Walia *et al*. (1988)[1], instruments spinning 360º within root canal were developed with the following objectives: simplicity, speed, safety in addition to stress reduction for both the clinician and patient. Therefore, rotary instrumentation represents a significant evolution in Endodontics and remains in constantly innovation regarding to its design. This increasingly results in a faster, safer and better quality preparation.

Root canal instrumentation should provide a continuous conical shape from apical to cervical third. Currently, "crown-down" technique has been proposed, which offers advantages such as conical preparation and greater enlargement of apical stop. This latter occurs due to the previous elimination of dentinal interferences located into cervical and medium third, enabling direct access for apical third cleaning and shaping while respecting local morphology. The implementation of "crown-down" technique occurred together with the development of nickel-titanium rotary systems, once most of these systems recommended this type of preparation. Modifications in the instrument's active point design have been constantly performed by the manufacturers, always attempting to improve the cutting power, allowing a preparation with greater taper, employing a smaller number of instruments. Therefore, different systems have been constantly developed and improved to reach these goals.

The employment of rotary systems demands a previous training because it requires the use of a contra-angle handpiece to drive the instruments, which reduces the operator's sensitivity of contact with dentinal walls, so that the technique mastery is necessary. In hand instrumentation, sensitivity contact with root canal walls is higher; however, it also demands the clinician's ability and technical expertise for accomplishing good results.

A few years ago, when the first NiTi rotary systems were developed, only Post-Graduation professors and students had access to this technology due to lack of contact and knowledge on this subject while in Dentistry graduation hand instrumentation prevails.

The great number of scientific researches already conducted as well as the most current researches on this subject contributes for the advancement and propagation which rotary instrumentation has reached in the last years. Most of the studies prove the positive aspects of this instrumentation type, now encouraging some schools to adopt rotary instrumentation in graduation. The undergraduate student does not present bad habits yet, making easier the learning of a new technology.

Although some scientific studies show that rotary systems promote faster, centering and conical preparations, most of the Brazilian Schools of Dentistry do not include rotary instrumentation in graduation yet and hand instrumentation still prevail. This fact can be sustained by the suspicion that undergraduates are not capable of using this technology and that accident fractures (e.g. instrument fracture) would be frequent. However, it is better that the undergraduate students learn rotary instrumentation in graduation than by themselves in private practice after graduation, following the instructions of sellers. It is important to highlight that the Disciplines of Endodontics, in most of the Brazilian schools' graduation, have enough workload hours to complement the learning planning with rotary instrumentation and to offer basic knowledge for undergraduates to practice it.

Noticeably, Schools of Dentistry teaching rotary instrumentation during graduation reach favorable results regarding to the quality of the executed treatment; also their undergraduates reported that rotary instrument is an important and modern learning for their dentist training.

It is important noting that schools employing rotary instrumentation during graduation do not perform it at the expense of hand instrumentation because the undergraduate needs to know hand instruments' characteristics and use prior to rotary instrumentation. The undergraduate must have basic

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[1] Walia H, Brantley WA, Gerstein H. An initial investigation of the bending and torsional properties of nitinol root canal files. J Endod. 1988;14:346-51.

expertise of hand instrumentation for, therefore, learning rotary instrumentation. This is because rotary instrumentation requires root canal's initial negotiation by using a hand instrument aiming to verify root canal's accessibility and path. Rotary does not replace hand instrumentation in all cases; frequently, there is the need of correcting an apical deviation, surpassing an elbow or fractured instrument so that hand instrument oriented by tactile sensibility is necessary.

It is also important to highlight that the apparent simplicity of rotary instrumentation could not lead to its trivialization about to be employed by undergraduates and clinicians without the proper knowledge on tooth morphology and endodontic pathologies, because consequently, endodontic treatment will not reach success.

At a time when time saving and productivity with high-quality work has been highly valued, rotary instrumentation is definitively consolidated.

Considering the aforementioned discussions, the Disciplines of Endodontics should be stimulated to introduce rotary instrumentation in graduation because it is a promissory, largely researched, constantly improved technology showing conditions for the undergraduate learns and practices it in addition to arouse interest in the specialty.

Denise Piotto Leonardi
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