



Letter to the editor

## Clinical Calibration and Standardization in Periodontics, a Must for the Dental Practice

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Periodontal diseases, including gingivitis and periodontitis, are recognized as the most prevalent diseases worldwide<sup>1</sup>. Severe untreated periodontitis is associated with tooth loss in adults, which negatively impacts the quality of life by impairing masticatory function, esthetics, and social integration. Therefore, early diagnosis, accompanied by adequate treatment, has the potential to prevent tooth loss and preserve masticatory function in those affected by periodontitis<sup>2</sup>. The diagnosis of periodontitis, and subsequent therapeutic decisions, are conventionally based on the use of periodontal probing to measure a set of clinical signs, such as probing depth, bleeding on probing, and clinical attachment levels, in addition to plaque and calculus accumulation, accompanied by interpretation of radiographic data, including the extent and pattern of bone loss.

Periodontal probing is subject to variability due to factors associated with the skills of the clinician, the characteristics of the periodontal probe used, or the degree of inflammation of the periodontal tissues. The lack of reproducibility of the data obtained through periodontal



probing can have serious consequences, such as misdiagnosis and, therefore, inadequate treatment. Since reproducible measurements are the basis of good clinical practice, the data recorded during the clinical evaluation of a subject with periodontal disease should be consistent and reproducible, regardless of the clinician recording them. In this regard, several studies confirm that variations in probing techniques between clinical examiners can be significantly reduced by periodontal clinical calibration and standardization programs. In particular, the calibration exercise for conducting periodontal clinical research is necessary to demonstrate the degree of reproducibility and accuracy of the reported data<sup>3</sup>.

Historically, higher education institutions provide clinical calibration courses at both the undergraduate and graduate levels. However, with the certainty of experience from working with clinical research studies, the criteria for standardizing and categorizing the evaluation of periodontal clinical parameters may vary. Currently, the Molecular Genetics Laboratory of the Faculty of Dentistry, with ISO 9001-2015 certification, performs periodic calibrations in its research and teaching clinics, intending to calibrate and standardize the professionals who are daily prepared in the clinics of the School of Dentistry of UNAM. With this, it is expected that these health professionals will reduce the time and costs associated with the generation of patient records in periodontal care, in addition to generating reliable data that can be used for research purposes for those who require it.

On the other hand, the authors of this paper generated a proposal for developing a digital tool that would be under emerging research, highlighting the relevance of periodontal clinical evaluation in patients with systemic antecedents and their sequelae. The tool, named “PerioDiagnosTool®” (Figure 1), with copyright registration 032408161657540001, was developed with the conviction that it would be a tool to capture and consult the periodontal clinical record of patients, facilitating their diagnosis and optimizing their treatment, in addition to including a periodontal clinical calibration tool, both for undergraduate and postgraduate students, as well as for specialists in periodontology and implantology, with our motto: “The science behind periodontal diagnosis”.



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