

# Review of: "Evaluating the clinico-biochemical association between stress and chronic periodontitis by estimation of serum cortisol and serum chromogranin-A levels"

Patricia Oliveira de Lima

Potential competing interests: No potential competing interests to declare.

The article brings a current and interesting topic. The introduction is well grounded, but the methodology is flawed and the statistics should be revised. In addition, the discussion is very long, but poorly supported and does not adequately respond to the tested hypothesis.

## Introduction

1. The introduction is objective and well written.

## Methods

1. Why were the samples not dosed in saliva? Blood collection is a major stressor for many patients. There is no need for this type of collection, as both markers are easily measured in saliva, with good blood correlations.
2. In addition to the stressor of blood collection, salivary collection would allow assessing salivary flow. Did the authors not consider this possibility?
3. It is known that men and women respond differently to stressful stimuli, in addition to the female menstrual cycle interfering with the progression of periodontal disease. These factors were not taken into account in the methodology.
4. The age variation is very large. Older patients tend to have more severe periodontal disease, in addition to taking many medications that interfere with salivary flow. This factor was also not taken into account.
5. Where are the questionnaires used? Were they not attached as supplementary material?
6. The trademarks of the kits used were not mentioned

## Results

1. There was no explanation of the results. Data display only.
2. Questionnaire results should be presented separately from periodontal parameters.
3. The correlation tables are not self-explanatory. It is not possible to understand what is being correlated to periodontal

parameters.

## Discussion

1. The authors talk a lot about the influence of stress on the immune system, the interaction between stress and inflammation, but they did not measure any marker (cytokines, interleukins) that could justify the findings.
2. Discussion is too long and there are descriptive paragraphs that should be in the results section.
3. Authors claim to the end: "Stress has till now been considered a non-modifiable determinant in the progression of periodontal disease". However, it is not possible to affirm the influence without analysis of more specific parameters, including immunological and microbial ones.

I suggest changing the focus and hypothesis of the work and reassessing the statistics.

It is important to relate stress markers to different degrees of periodontal disease, which was not reported in this study.