

Review of: "Improvement in Cervical Spinal Misalignment After the Application of the Neuromuscular Atlasprofilax Method in one Single Session. A Case Report."

Bruno Soares

Potential competing interests: The author(s) declared that no potential competing interests exist.

Thank you in advanced for inviting me to review this article.

From the analysis of the document, some points for improvement stand out regarding its structure and content

The introduction of the article should include a more detailed description of the patient's condition, explaining her physiopathology, both at the level of the stomatognathic and cervical systems. Afterwards, the correlation between these conditions must be presented, indicating the reason why they have chosen to intervene at the cervical level. This question is important, since the pathology of the stomatognathic system produces, through compensation mechanisms, alterations in the cervical condition and function. In other words, cervical disorders in TMD patients are secondary injuries and intervention at the level of the stomatognathic system is essential to improve cervical condition. In this way, it should be clarified whether or not any treatment was performed on the patient at the level of the stomatognathic system, since the pathology was identified. Regarding the intervention under study, the choice of its use must be validated through the literature. This whole section should end with a detailed description of the purpose and objective of the study. Some of this information is found in other parts of the article, in a disorganised and somewhat confusing way.

Regarding the materials and methods, it will be necessary to provide greater detail of all the procedures and options taken, with theoretical grounds for their choice. The description of materials and methods should allow the replication of the study to compare the results between different study cases (to be improved). Concerning the physical assessment of the patients, this should be carried out in their usual condition or posture, in order to identify their body mechanics and placement in space. However, the X-Ray was performed with the mouth open. This fact should be justified and grounded, since mouth opening promotes increased tension in the suboccipital and cervical musculature, changing their habitual posture and presenting potential for the promotion of deviations. On the other hand, according to the images presented, it must be considered that the patient presents cervical deviation when opening her mouth and only in this condition. To state that the patient presented cervical deviation in her usual condition, measurements or images should be presented. A detailed description of the device used and its characterization functioning mechanism and the frequency used should be presented. Finally, a detailed description must be provided, preferably accompanied by an image, where the place where the intervention was applied must be clearly defined. I emphasize that the aim of the study will not be to assess whether or not Atlasprofilax promotes cervical alignment, but rather to quantify its effect.

Regarding the results, the before and after imagens should be reviewed. The paintings try to help the perception of the structures assessed. However, I would suggest I would suggest the use of thin lines study to enable the visualisation of the X-ray images. The paintings do not allow this analysis to be carried out rigorously. One factor that stands out in the

image is that after the intervention, there is a greater lateral inclination of the occipital base. This inclination automatically produces repercussions at TMJ level, increasing its internal pressure, affecting the structures and their functionality. This fact is very important in this patient, as she has a significant TMJ pathology and the implications produced by this tilt should be discussed.

The discussion needs a rectification as to the objective and its content. At this stage, the results should be discussed and debated with the literature. I suggest you to start by discussing the results obtained at the cervical and craniofacial level (as shown in the picture). The results obtained should be compared with the literature and other studies that use Atlasprofilax. It should then be discussed in comparison with other therapeutic interventions of rehabilitation at the cervical level and of the stomatognathic system, as well as in comparison with pharmacological and surgical interventions, if they exist. In the discussion presented here, reference is made to some muscles, namely the semispinalis. How was the intervention promoted to this muscle since it is in a deeper layer? How was the physical and reaction barrier of the trapezius muscle overcome? This detail is very important for the reliability of the intervention performed. One can also read references about mechanotransduction. This should be explained in greater detail, as mechano-transduction presupposes rehabilitation therapy through movement, and the intervention under study does not presuppose this type of intervention. In the course of the discussion, there are sentences without citations or with ones that are not compatible with what is described.

Finally, the conclusion must be revised. It should be shorter and concise, responding to the purpose and objective of the study, pointing out the weaknesses of the study (if there are any) and ending with guidelines for future studies.