

Tiziano Pacini¹, Elisabetta De Juliis² and Ferdinando Pivetta²

1. Faculty of Public Health and Health Care, University of Ruse, Bulgaria

2. Collegio Toscano Periti Esperti Consulenti, Florence, Italy

Abstract: A 49 years old man who started the treatment with the Biomechanic Anthropometric Ergonomic method 25 months ago, referred pains diffused to the back and neck. The pain caused him panic attacks. The pains have attenuated but not subsided yet, the structural change is very important and it's detectable on the neck radiography. **Method**: person with scoliosis and postural disorders all over the body, pains and panic were treated clinically as a fibromyalgic that has been associated with the Biomechanic Anthropometric ergonomic method.

Key words: Posture, Biomechanic Anthropometric Ergonomic Method, fibromyalgia, back and neck pain, panic attacks.

1. Introduction

The person is a 49 years old male, he initially showed pains diffused to the back, to the neck and to the temporo-mandibular joints. After 4 months, we with the B.A.E method [1-3], it's still ongoing, and we performed a monitoring for verify of the improvements. The test was taken both photographic and radiographic type to verify the structural changes of the body and the change in the usage of the muscle



Fig. 1 In START, you can observe the tensions that place the head off axis and inclined [4, 5]. In the control after 18 months, a head aligned with the sagittal plane is observed.

obtained a clear improvement and the person ceased the antalgic treatments. After 25 months, the antalgic treatments had ceased for a year now. The treatment chains related to the position of the neck.

As we can observe Fig. 1 at the Start the face shows evident asymmetries. We can see that the left cheek is very asymmetric compared to the contralateral. The whole head is bend towards the right part of the body above the shoulders.

Corresponding author: Tiziano Pacini, Ph.D., research fields: Postural Ergonomics, Public health and Heath care. Email: tizianopacini@gmail.com.

From the still figures 2, 3, 4 and 5, it is found that the patient shows an asymmetric posture in the projection at

all levels. The patient is clearly compressed with an alteration of the lordosis curves of the rachis.



Fig. 2 The pictures show that the body has aligned with treatment B.A.E. progressively to the sagittal plane.



Fig. 3 The pictures show that the body has aligned with treatment B.A.E. progressively to the sagittal plane.

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Fig. 4 The person has progressively expanded with treatment B.A.E. and the lumbar and cervical lordosis [6-8] move close to the physiology as indicated by the curves that are tangent to the START image (observe the arrows).

As can be seen from the above pictures, with the passage of time, the patient's activity time is

prolonged, and the lumbar spine and cervical lordosis are close to normal physiology.



Fig. 5 The person has progressively expanded with treatment B.A.E. and the lumbar and cervical lordosis move close to the physiology as indicated by the curves that are tangent to the START image (observe the arrows).

The situation, which has been clinically monitored, reported these images below.



Fig. 6 X-ray: Occlusal plane of the person. Arrows indicate temporomandibular joint changes and occlusal misalignment.



Fig. 7 Cervical NMR where a reversal of cervical lordosis is observed before treatment B.A.E.



Fig. 8 Lumbar NMR where an alteration of the lordosis is observed before treatment B.A.E.

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As we clearly observe in Fig. 6, we have an alteration of the ATM condyles and of the occlusal plane. In Fig. 7 and Fig. 8, the Nuclear Magnetic Resonances show the lordosis curves of the cervical and lumbar column. They are altered compared to the normal physiology with consequent morphological alterations of the relative vertebrae and we can also observe an alteration compared to the physiology of the spinal cord position.

Consequently, to this situation the person is in a disadvantage in the management of the gravitational field so that in the lumbar rachis tract we assist to an invention of position of the first vertebrae and also in the cervical tract, the third, fourth and the fifth vertebra turns out working in the opposite position compared to the correct one.

If the positions of part of the vertebrae are wrong, it means that some muscle groups in their work for the necessity of postural adjustment make a fixed point in incorrect rachis attacks.

Below we can observe the variation in the position of the cervical vertebrae in the 25 months of postural re-education with the Biomechanic Anthropometric Ergonomic method (Fig. 9).



Fig. 9 The change in cervical lordosis towards physiology is observed. Standing position. From left to right: Before treatment; after8 months with B.A.E. method; after 25 months with B.A.E. method.

We can observe from the comparing images in Fig. 9 that the difference in the physiology shown by the red dotted line was greatly reduced, and the occlusal plane (visible by the orientation of the molar teeth) is now in the correct horizontal position. The curve inversion of cervical lordosis is cleared after 25 months and we now have a straightening which preludes in the near future to the restoration of the lordosis physiology.

During these 25 months, we performed repeated manual postural reduction to promote changes in motor memory related to re education of exercise therapy, and performed periodic ozone therapy in the dorsal region to reduce pain and inflammation during the change.

2. Materials and Methods

Biomechanic Anthropometric Ergonomic Method B.A.E., Coal Industrial & Mining Supplie, type: HT-A2 Handheld IR camera, Baropodometer Footcheker Loran Eng., 2012

3. Conclusions

After 25 months of Ergonomic Postural treatment, we evaluated the results according to the parameters of the B.A.E. Method.

The situation is:

1. The pain symptoms were greatly reduced with the use of Ergonomic braces made following the B.A.E method.

- 2. The pharmacological treatment was kept unaltered for the first 2 months and later reduced by 50% up to four months. Later the medical treatment was interrupted apart of the 3 cycles of ozonotherapy made after a month in the last six months. The patient reports having worn with great comfort the Tutors daily and was established by the photographical improvement.
- 3. It suggests that even when fibromyalgia is particularly severe, it is possible to obtain results that have never been achieved by classical pain treatment methods due to the association of posture improvement.

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