

FRI-ONLINE-HP-11

**SCOLIOSIS IN A FEMALE OF 56-YEAR-OLD WITH HIP PROSTHESIS.
TREATED WITH BAE METHOD: 12 MONTHS VERIFICATION ¹¹**

Tiziano Pacini

St. D. Vatax, 30 -1510 Sofia, Bulgaria
Phone: +359878474304; +393355262723,
E-mail: tizianopacini@gmail.com

Loredana Granata

via G. Verdi, 26, - 50066
San Clemente, Reggello Italia
Phone: +393881460207,
E-mail: loredanagranata28@gmail.com

Elisabetta De Juliis via Mulinaccio

11 - 50032 Borgo San Lorenzo, Italia
Phone: +393356477583
E-mail: elisadejuliis@gmail.com\

Andrea Pacini via Mulinaccio

11 - 50032 Borgo San Lorenzo, Italia
Phone: +393383856086,
E-mail: pacioandre@gmail.com

***Abstract:** Postural alterations of the rachis in female of years 56 who has undergone right hip surgery nine years ago. The person reports continuous lumbosacral back pain and hip pain with persistent burning in the right buttock. It has been treated with biomechanical anthropometric ergonomic method (B.A.E.) with positive results. **Method:** woman previously treated with physiotherapeutic protocols of the official medicine with negative results for many years. During the medical management and physiotherapy the pain did not improve, it was treated with the biomechanical anthropometric ergonomic method for 12 months with positive results on both mobility and pain.*

***Keywords:** Posture, Biomechanical Anthropometric Ergonomic Method, Scoliosis, Back Pain, Surgery with Hip Prosthesis.*

INTRODUCTION

The woman reports having had in adolescence frequent headaches to which she had never given much importance. These discomforts in the course have been reduced but over the years they have become pains and burns in the back, hips and knees worsened over time. After several orthopedic visits, reluctant to the surgery, she decides to try alternative treatments to reduce discomfort. She fails to get results and accepts the hip replacement surgery that is done in 2016. After the surgery the physiotherapy begins without results actually the general situation turns out ulteriorly worsened. She then gets osteopathic sessions, ozone therapy, techartherapy with negative results. Convinced of having to deal with a basic postural problem, she decides to rely on a Postural Ergonomist to be treated with the B.A.E Method.

Materials and Methods:

Baropodometer Footcheker Loran Eng., 2020

¹¹ The research paper was presented on November 29, 2021 at the Health Promotion Section of the 2021 Online Scientific Conference co-organized by University of Ruse and Union of Scientists - Ruse. Its title in Bulgarian is: „ВЪЗДЕЙСТВИЕ НА ПОЗАТА И УПРАВЛЕНИЕТО НА ГРАВИТАЦИОННОТО ПОЛЕ ПРИ ФИБРОМИАЛГИЯ И ВЪРХУ СИМПТОМИТЕ НА БОЛКАТА“.

Biomechanical Ergonomic Anthropometric Method



Fig.1

In Fig.1 we can see how the structure of the head has changed after one year of treatment with the Biomechanical Anthropometric Ergonomic method. We observe a correction of the ocular planes, and temporomandibular. The facial expression is completely changed and shows greater symmetry. The facial expression after a year shows well-being compared to the start and confirms that even the mental situation, although not measurable, is also improved.

Initially a baropodometric evaluation was carried out, from which emerged the postural corrections to be performed according to the B.A.E. method. The appropriate corrections to which have been associated functional re-educations both manual and with instrumental association to practice stretching exercises. From Fig.2 to Fig.5, we can observe the postural and structural variations obtained. The arrows indicate the areas of greatest variation. The first observable variation is the greater distension of the rachis with consequent increment of the height. This results in a greater symmetrization of the two hemispheres which allows a better coherence in the antigravitational muscular response. We can see a greater head centering, more aligned shoulders, the scapulae in a more physiological position, the triangles of the size more symmetrical, buttocks muscles more tonic. In general, the whole lower limb has a more toned musculature especially in the leg. The improvement of antigravitational functionality has allowed a reduction of the rotation of the rachis.

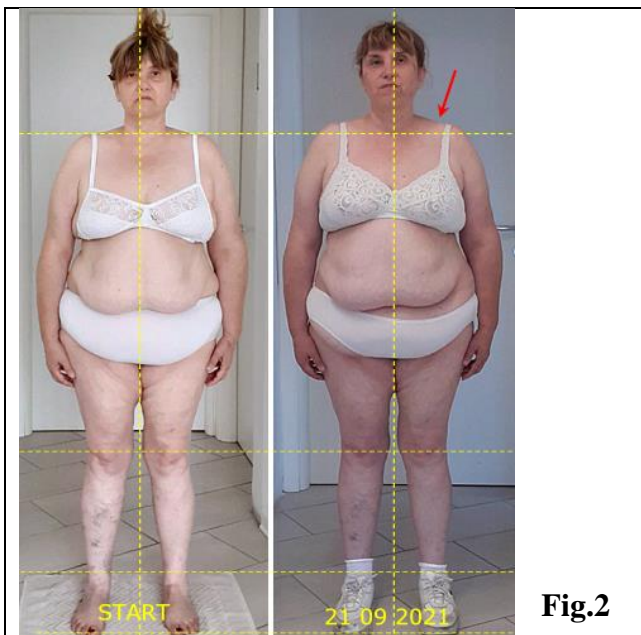


Fig.2

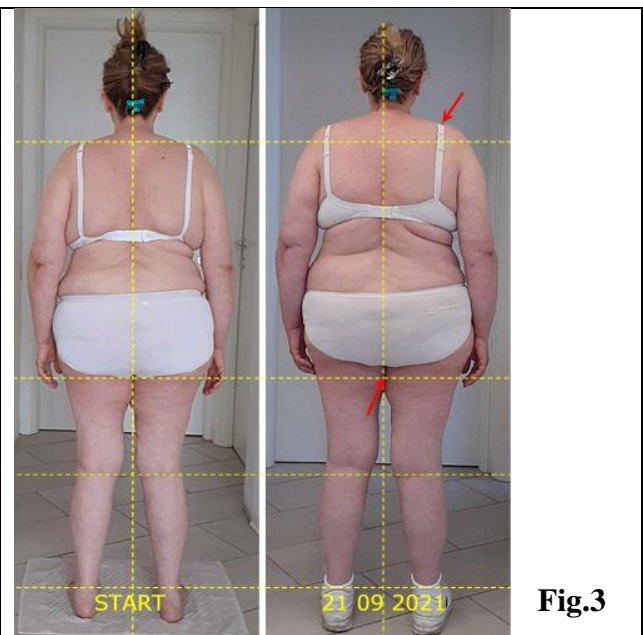


Fig.3

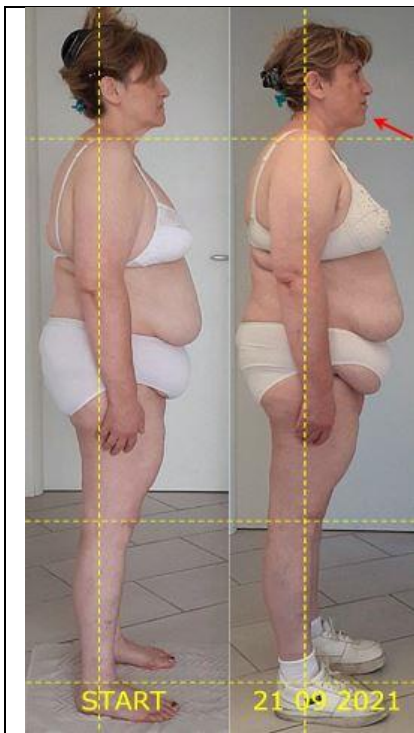


Fig.4

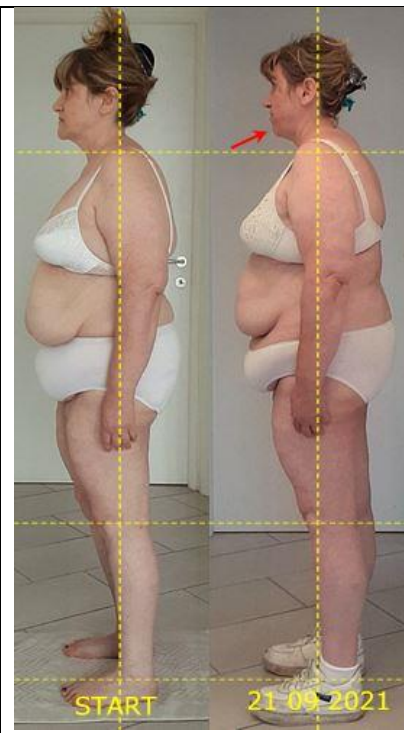


Fig.5

The postural variations found in the photographic images will necessarily have a consistent feedback in the images normally used for diagnostics such as RX.

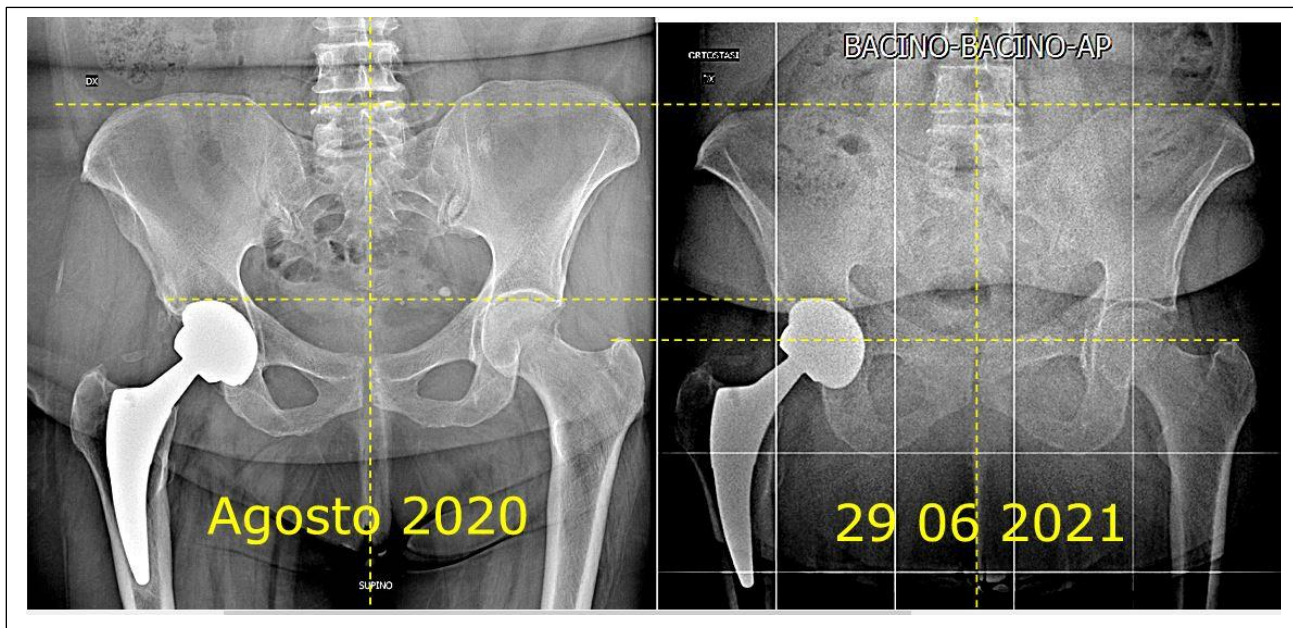


Fig.6

Fig.7

From the above images it is possible to observe a change of position of the pelvis: after 10 months from the beginning of the treatment with B.A.E. method (Fig.7) it is noted that the iliac wings have aligned; The holes between ischium and pubis result in the X-ray perspective larger as they are closer to their physiology. The position of the lumbosacral vertebrae in Fig.7 is more correct.

In line with the results previously highlighted through the images, we now demonstrate how the baropodometric evaluations carried out with BAE method confirm how these results are predictable through the application of a mathematical model. This makes it clear that variations in the gravitational field management have consequences in postural variations proportional to the model applied.

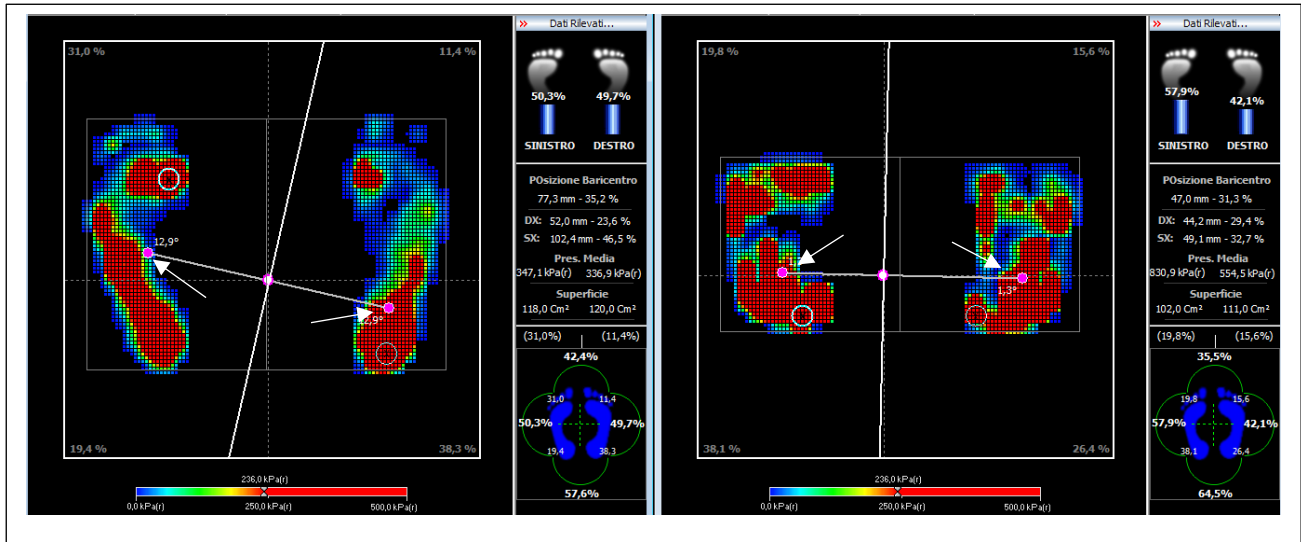


Fig.8 START

Fig.9 1 YEAR

In Fig.8 and Fig.9 relative to the images stationary of the person obtained on the baropodometer following the BAE Method we can observe how in Fig.9 we assists to a baricentric alignment of the body (we observe the pink points indicated with the white arrows).

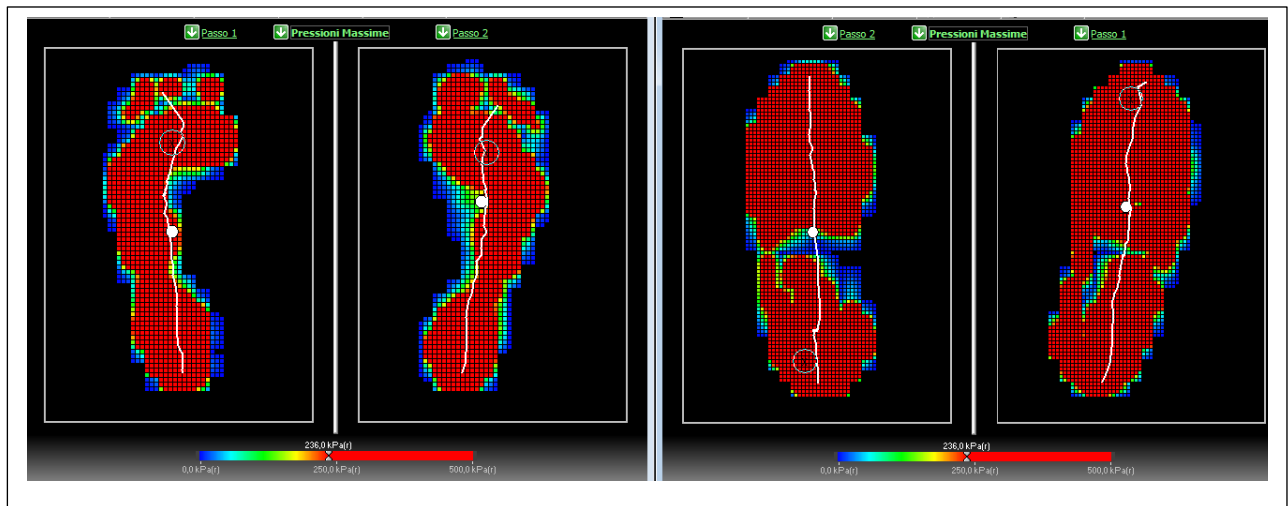


Fig.10 START

Fig.11 AFTER 1 YEAR

From the images of Fig.10 and Fig.11, relative to the deambulation of the person, we can observe how in Fig. 11 the left foot (left footprint) is placed compared to the more symmetrical sagittal plane. The white lines passing through the breach mark represent the course of the barycentre during the step and it is observed that in Fig.11 these lines are longer and more symmetrical. In conclusion, after 1 year of BAE treatment with ergonomic interfaces, the pace is within the normal values. This produces a muscular activity of the whole locomotor apparatus more functional and therefore closer to the physiology with consequent minimization of the dystonia. This condition is observed both stationary and walking with improved performance, reduction of fatigue with disappearance of painful symptoms. We can say that the application of the BAE method allows a strong preventive action against postural difficulties.

CONCLUSIONS

After 1 year of Postural Ergonomic treatment, we evaluated the results according to the parameters of the Biomechanical Anthropometric Ergonomic Method.

The situation is:

1. The painful symptoms disappeared completely after about six months of the usage of the Ergonomic Tutors made according to the B.A.E. Method.
2. The person reports that daily activities are again possible without discomfort.
3. She reports that she wears the tutors daily with great comfort and this is demonstrated by the photographic improvement obtained after 1 year.
4. It is also shown that in cases in which there have been failures of the traditional methods of rehabilitation it is possible to achieve results never achieved until today with rehabilitation treatments implemented with Ergonomic Postural interfaces to improve the management of the gravitational field.

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