

The role of functional and proprioceptive kinetotherapy in the prophylaxis of the ankle-flat-foot complex - a case study

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Abstract

Premises. Correct posture is ensured by the adequate synergic and perfectly coordinated contraction of the antagonist muscle groups. From the studies performed so far on flat feet in little children (4-7 years) a segmentary approach to the problem which contains classical exercises (tip toe walking, shoe inserts, sole massage, rolling of the sole on a stick) has been observed. All these exercises are valid, but there is a new theory - which is aimed at the analysis of the ankle problem as a complex - named "the Bernstein module".

Objectives. As general objectives we have established: identification and detection of the causes which determine the dysfunctional posture of the ankle-foot complex. The physical therapy objective consists in the formation of the adequate placing of the soles of the feet on the ground during orthostatism and walking, combating imbalance, formulating a strategy for the alignment disturbances, the achievement of a balance between muscular contraction and relaxation, the improvement and obtaining of an efficient, normal, correct, economical, energetic walking and the improvement of the static/dynamic balance in different postures of the body.

Methods. Case study: AC, female gender, 6 years old with incipient flatfoot and mild deformities of the knee articulations, and the hip articulation which had produced coxa valga (unequal leg length).

Results. The analysis of the results obtained following the case study comprised the initial and final testing of the measured parameters: body alignment, strength of the inferior limbs, balance, obtaining positive results for all the parameters.

Conclusions. One of the causes that that caused the dysfunctional posture of the ankle-foot was genetic. Therefore we can confirm that the kinetic programs that appeared in the specialty literature such as: tip toe walking, sand walking, seizing different objects with the toes, wearing shoe inserts, proved to be less effective (the little girl had worn shoes with inserts since she had began to walk). The kinetic program suggested by us proved to be more efficient, a fact that was demonstrated by the results of the evaluations that were made. Following the implementation of our kinetic program, the child became very willing to do the proposed exercises, a fact that led to the increase of their efficiency.

Keywords: Physical therapy, proprioception, „Bernstein module”, ankle-flat-foot complex.