

POSTURAL CONTROL VARIABILITY AND ELECTROMYOGRAPHY ANALYSIS DURING TRAINING OF THE CLASSIC BALLET

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INTRODUCTION

The movement to Elevè involves the support of body weight and run with different placements of the feet. The constant use of various sequences of movements of ballet and the complexity of implementation with respect to the control of loading and postural instability, this movement was selected for this research study with the objective of the analysis through the platform of postural balance and surface electromyography during amounts of movement made during the training of dancers with two different types of shoes

METHODS

This study was approved by the Research Ethics Committee. We analyzed 10 dancers, female (19.6 years, weight 54 kg and height of 1.63 m) which had no bone injury mioarticular-the last three months. It is emphasized that all participants are part of the corps de ballet of the city, with experience of at least four years and weekly training for six to eight hours.

The assessment was made in a posture where environmental conditions were suitable for evaluation. Data were collected in two stages using two models of shoes A and B. Were taken due care with the lighting and noise sonorous as the attention of the volunteer is considered a factor that interferes with the assessment of postural control.

For analysis of the dynamic and temporal parameters, was utilizadada a balance platform model **BIOMECH-400** by **EMG System do Brasil Ltda**, with dimensions 50 x 50 cm, with isolated signal conditioning for strain gauge, amplifier gain calibrated by software, Common mode rejection of > 100 dB, 16 bits of resolution, sampling frequency of 100 Hz synchronized with surface electromyography model **EMG800C** by **EMG System do Brasil Ltda** previously calibrated

RESULTS AND DISCUSSION

All dancers who participated in the study have a good time to practice, between 5 and 8 years, all practicing in soil of wood and use the same tip for a large number of classes / tests (12 or more classes / trials with each pair of shoes). Most made the choice of shoe for item "comfort", although these do not have a clear criterion for that item. We found that the shoes B postural balance was more stable than the shoe A. We found that with the use of the shoe had a greater muscle recruitment compared the use of shoe B.

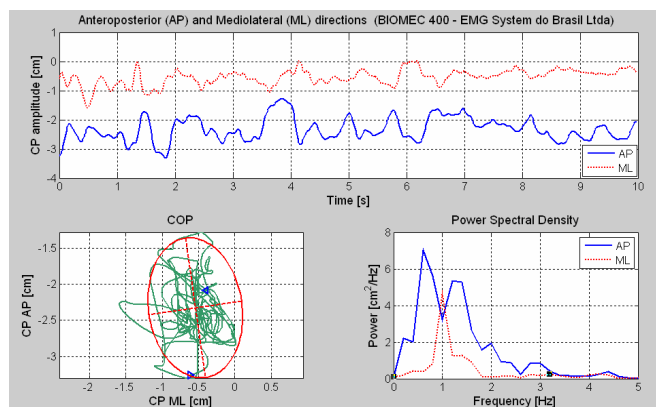


Figure 1: Variables of postural balance with shoes A.

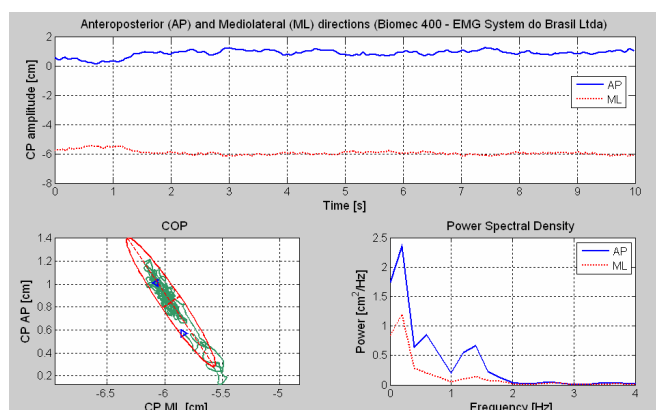


Figure 1: Variables of postural balance with shoes B

CONCLUSIONS

The study of biomechanical characteristics of the dance on the tips should consider parameters such as forces of reaction of the soil, levels of muscular activity, distribution of pressure in the plant of the feet and kinematics for a more comprehensive study for the investigation of parameters that can mitigate the possible damage caused during the practice of dance.

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