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Keywords: Children; Gait; Balance; Cerebral palsy

Objective.-- Gait involves for the subject to constantly maintain his/her postural balance while propelling forward to move. The study of intersegmental movements (head, trunk and hip) and of the whole body (Center of Mass-COM relative to the Centre of Pressure-COP) provides informations on strategies to control the dynamic equilibrium [1,3]. In Cerebral Palsy (CP), gait often results into a set of persistent movement and posture disorders [2,4]. The aim of this study was to characterize the different strategies used by children with CP in order to propel themselves forward while maintaining their balance.

Materials/participants and methods.-- Data were collected by a motion analysis system (Vicon® - Oxford Metrics, Oxford, UK) in order to achieve a Clinical Gait Analysis for 16 children with CP and 16 healthy children of the same age (11 years ± 1.5).

Results.-- The intersegmental kinematic analysis shows significant differences between the two groups. These differences are also observed for locomotor parameters and for kinetic data of the propulsive forces from the COM-COP dynamic trajectory.

Discussion.-- Unbalance COM-COP allows, by production of propulsive forces, the forward movement of the subject. However, in children with CP, we observed a postural organization characterized as an “en bloc” strategy resulting in greater COM-COP unbalance. This unbalance results in particular in heavy braking during placement of the foot on the ground.

References

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Depression at the mothers of children with cerebral palsy
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Keywords: Mothers; Children; Cerebral palsy; Depression

Objective.-- Study of the psychosocial profile of the mother’s child with cerebral palsy and identify the predictive factors of depression.

Materials and methods.-- Forward-looking study led since January 2013. Thirty mothers were questioned during the consultations of their children reached by cerebral palsy at the physical medicine and rehabilitation department. The evaluation of the children takes into account the following parameters: age, sex, clinical state, functional status by the Gross Motor Function Classification System (GMFCS).

Mothers answered the questionnaire which contains: age, sex, educational level, profession, environment of life, health insurance fund, and psychological profile by hospital Anxiety Depression scale (HAD).

Results.-- Forty-five percent of the mothers present an anxious and/or depressive psychological profile. The presence of a child affected by cerebral palsy increases the risk of depression at the mothers. However, this risk is not influenced by the bad functional status of the children (GMFCS level 4 and 5). The lower sociocultural level, the absence of coverage by the health insurance fund seems to increase the risk of psychological disorder.

Conclusion.-- The risk of depression at the mothers of children with cerebral palsy is raised. A medical coverage, a psychological and social support of the children permits to improve the adaptation of the mothers and to decrease the depression risk.

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