

Clinical gait analysis: How to integrate the measuring data together?

(Case Study)

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Abstract

Gait analysis is considered as a critical part of assessment to pinpoint, plan and assess intervention goals to maximize children management through detecting walking abnormalities and evaluating outcomes after intervention. 3D gait analysis is recognized to be the most definite way to evaluate gait deviations by affording biomechanical foundation to understand pathological gait.

The talk will be in a form of case presentation for a child with cerebral palsy has the following measures:

1. 3D kinematic data.
2. Kinetic data.
3. Dynamic EMG.
4. Clinical examination for neuromotor system.

During the presentation we will explain reading of the data, show how to integrate data together sort from walking measurement as well as the clinical examination. Analysis of the holistic data will be addressed from the biomechanical frame of reference and neurodevelopmental concept.

The aims of the talk are:

1. To show how to read 3D gait data in integrated process.
2. To figure out the primary, secondary impairment and the compensatory deviations.
3. To guide therapist to high light on certain considerations during the therapy based on gait analysis.

Key words: 3D gait analysis, clinical examination and physical therapy.