**Objectives:** Segawa’s Disease (dopa-responsive dystonia) characterized by dystonic with fluctuation of symptoms throughout the day. It’s a rare disease which clinical presentation in congenital forms resembles the CP, but distinguished by its reversibility. Treatment with Levodopa promotes significant improvement. Therefore, it’s essential to carry out a differential diagnosis by a health professional, considering cases of Segawa misdiagnosed as CP. Our objective is to draw attention to this issue through the case report of a child accompanied by a multidisciplinary team of rehabilitation.

**Participants and Setting:** A 7-year-old female, delayed global development, mobility in a wheelchair assisted by third parties, Gross Motor Function Classification System (GMFCS) 5 and brain injury risk factors. The first main diagnosis was CP. Neurological exam with poor trunk balance, tetra spasticity, hyperactive reflexes, dystonia, floating tone, tremors of head and upper limbs and bilateral Babinski signal. Cognitive delay (early preoperational period according to Piaget). She did not attend school and had no ability to write. Normal neuroimaging and laboratory tests. Segawa disease was suspected after clinical evidence of floating tone and hand skills during a hospital rehabilitation period.

**Design:** Case Report

**Methods:** Study based on electronic medical record analysis. Hand function was assessed by the Peg Board instrument and cognitive developmental according to Piaget. Physical exam, including: motor skills and functional gait analysis were recorded with images and videos every two months during the first year and annual follow-up for six years.

**Results:** The therapeutic test was conducted with Levodopa 250 mg + Carbidopa 25 mg. There has been progress in motor development, cognitive and hand function. Acquired gait with assistance mobility in five months and independent walking after 10 months (GMFCS 1); cognitive gains (transition from pre-operational period/ preoperative); hand function expected for age (after 22 months). Started studying at regular school, has ability to write properly and independence in daily activities.

**Conclusions:** The interdisciplinary teamwork and recognition of clinical signs enabled the diagnosis of Segawa and medical treatment with significant clinical improvement. There was a change of the maximum level of functional impairment (GMFCS 5) to minimum (GMFCS 1). The data point for broader benefits to the treatment in Segawa, regardless of age of onset of medications (cognitive gains and general operation). Highlights the importance of differential diagnosis, teamwork, continuity of treatment and follow-up since the diagnosis is clinical.

**References:**
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