


The relationship of dystonia and choreoathetosis with activity, participation and quality of life in dyskinetic CP children

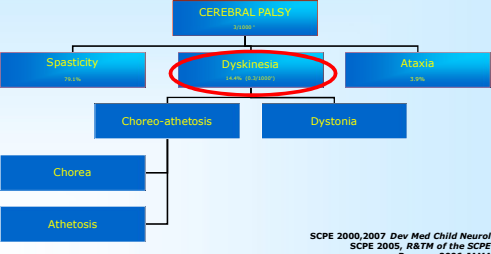
Elegast Monbaliu

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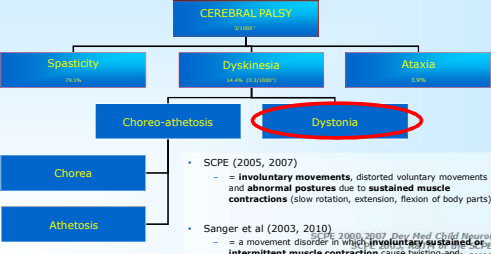
Introduction



SCPE 2000,2007 Dev Med Child Neurol
SCPE 2005, R&M of the SCPE
Bax e.a. 2006 JAMA
Rosenbaum e.a. 2006, 2007 Dev Med Child Neurol
Sanger e.a. 2010 Mov Disord

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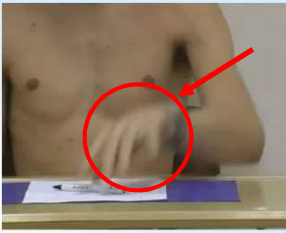
Introduction



- SCPE (2005, 2007)
 - = **involuntary movements**, distorted voluntary movements and **abnormal postures** due to **sustained muscle contractions** (slow rotation, extension, flexion of body parts)
- Sanger et al (2003, 2010)
 - = a movement disorder in which **involuntary sustained or intermittent muscle contraction** causes **bristling or repetitive movements, abnormal postures or both**

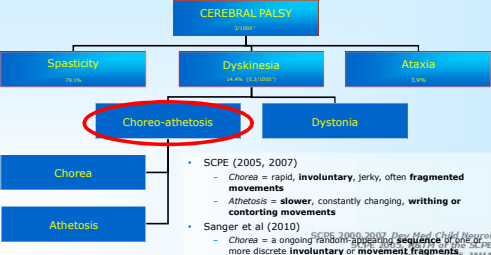
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Introduction



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Introduction



- SCPE (2005, 2007)
 - Chorea = rapid, **involuntary**, jerky, often **fragmented movements**
 - Athetosis = **slower**, constantly changing, **writhing or contorting movements**
- Sanger et al (2010)
 - Chorea = a ongoing **random appearing sequence** of one or more discrete **involuntary or movements** (fragments)
 - Athetosis = a **slow**, continuous, **involuntary writhing movement** that prevents maintenance of a **stable posture**

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Introduction



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Introduction

Problem

- Complex movement disorders
- Difficult for **targeted therapy**
 - Little is known about the **clinical presentation** of dystonia and choreoathetosis in dyskinetic CP
 - Little is known about **impact** of dystonia and choreoathetosis in dyskinetic CP

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Introduction

Dystonia and choreoathetosis in dyskinetic CP

THE LANCET
Neurology

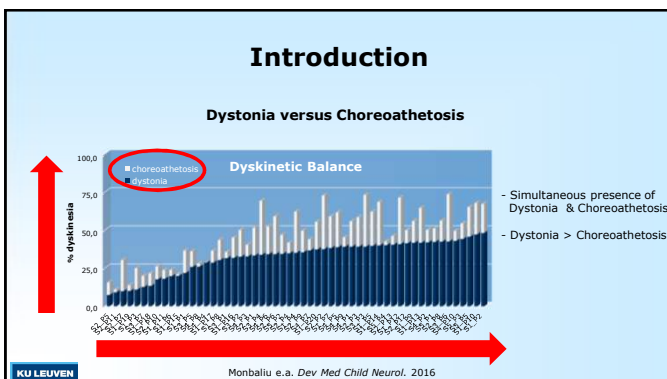
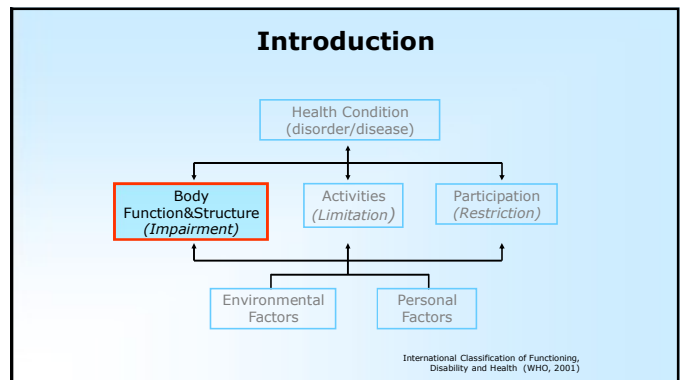
Volume 16, Issue 9, September 2017, Pages 741-749

Review
Clinical presentation and management of dyskinetic cerebral palsy

Eliegest Monbaliu PhD^{1,5}, Kate Himmelmann PhD¹, Jean-Pierre Lin MD², Els Ortbus PhD³, Laura Bonouvie MD¹, Prof Hilde Feys PhD⁴, Prof R. Jeroen Vermeulen MD³, Prof Bernard Dan PhD^{1,2,4,6}

Monbaliu e.a. *Lancet Neurol*, 2017

International Classification of Functioning, Disability and Health (WHO, 2001)



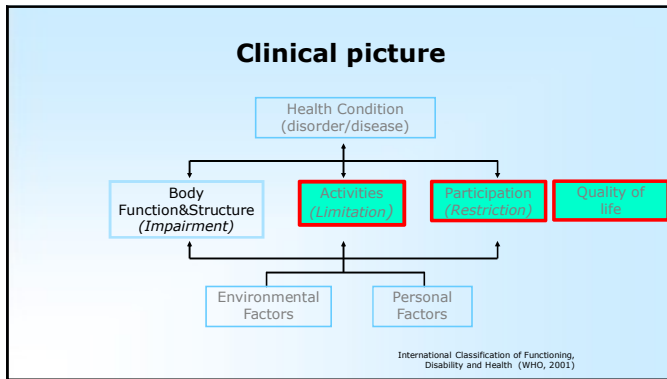
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Monbaliu e.a. *Eur. J. Ped. Neurol*, 2017



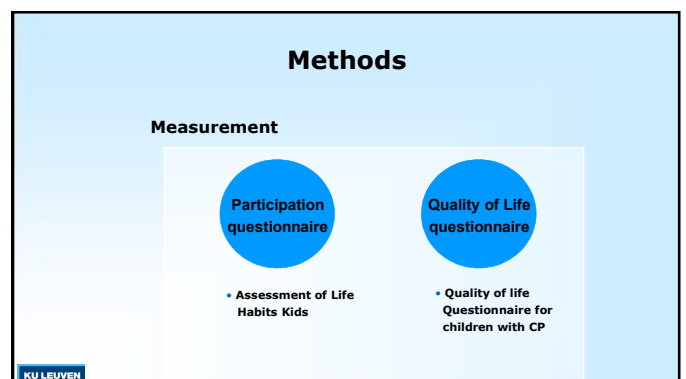
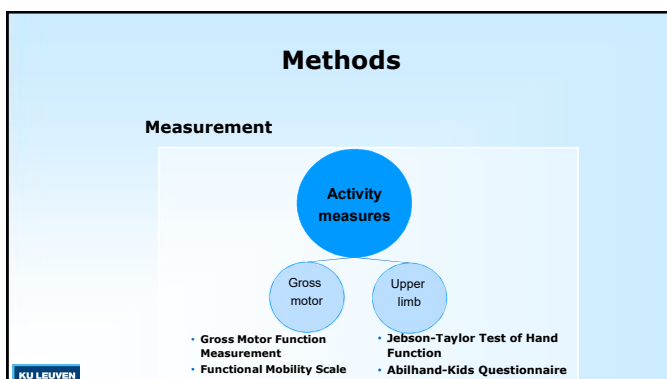
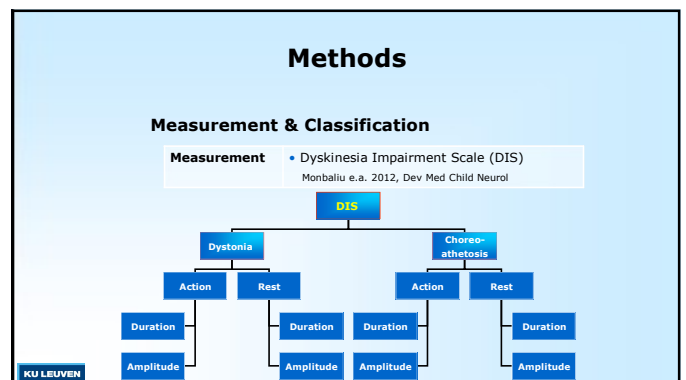
Objectives

To gain more insights in the relationship between the presence of **dystonia** and **choreoathetosis** & the level of **activity**, **participation** and **quality of life**

Methods

Participants

Characteristics	<ul style="list-style-type: none"> N=55 (30 male; 25 female) age 5-22 yrs Mean age=14y6mo ; SD=4y1mo
Inclusion criteria	<ul style="list-style-type: none"> predominant dyskinetic CP able to understand test instructions
Exclusion criteria	<ul style="list-style-type: none"> orthopaedic or neurosurgical interventions < 12 months spine fusion



Results

gross motor activity measures

		Gross Motor Function r_s	Functional Mobility Scale r_s
Dystonia	Total %	-0.65**	-0.71**
	Leg %	-0.58**	-0.69**

Moderate to good relationship

		Gross Motor Function r_s	Functional Mobility Scale r_s
Choreoathetosis	Total %	-0.05	-0.27*
	Leg %	0.12	-0.14

No to very weak relationship

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Results

upper limb activity measures

		Jebson-Taylor Test r_s	Abil-Hand Kids Questionnaire r_s
Dystonia	Total %	0.64**	-0.67**
	Arm %	0.76**	-0.72**

Good to excellent relationship

		Jebson-Taylor Test r_s	Abil-Hand Kids Questionnaire r_s
Choreoathetosis	Total %	-0.17	-0.09
	Arm %	0.24	-0.11

No relationship

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Results

participation and quality of life

		LIFE-Habit (n=48) r_s	CP-QOL (n=45) r_s
Dystonia	Total %	-0.42**	-0.32**
	Mouth	-0.39**	-0.31**
	Arms	-0.60**	-0.44
	Legs	-0.23	-0.11

fair to good relationship (except for the legs)

		LIFE-Habit (n=48) r_s	CP-QOL (n=45) r_s
Choreoathetosis	Total %	0.13	-0.21
	Mouth	-0.14	-0.08
	Arms	0.05	-0.21
	Legs	0.14	-0.29*

No relationship

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Discussion

- Moderate to high relationship between dystonia and activity, participation, quality of life
 → **New finding**
- No to low relationship between choreoathetosis and activity, participation, quality of life
 → **New finding**

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Discussion

- Impact of **dystonia** on functional activity, participation & quality of life **higher** compared with **choreoathetosis**
- Therapeutic strategies** => Dystonia?
- Dystonia is **masking** choreoathetosis?

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Conclusion

- This is the **first study** to examine relationship between dystonia and choreoathetosis presence with activity, participation, quality of life
- Future **targeted intervention studies** are needed to increase insights of dystonia and choreoathetosis and its impact in children with dyskinetic CP.

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Questions?

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