


Cerebral Palsy: Facts and Fiction-What is CP all about?


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August 9th 2017

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Learner Outcomes

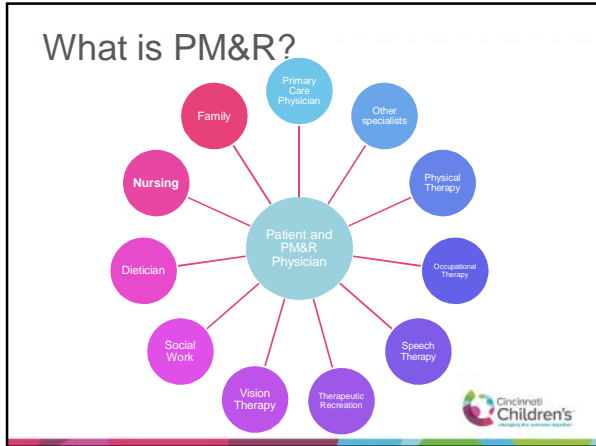
- Describe etiology, signs and symptoms of Cerebral Palsy (CP)
- Identify the role of various subspecialists involved in the care and treatment of children with CP.

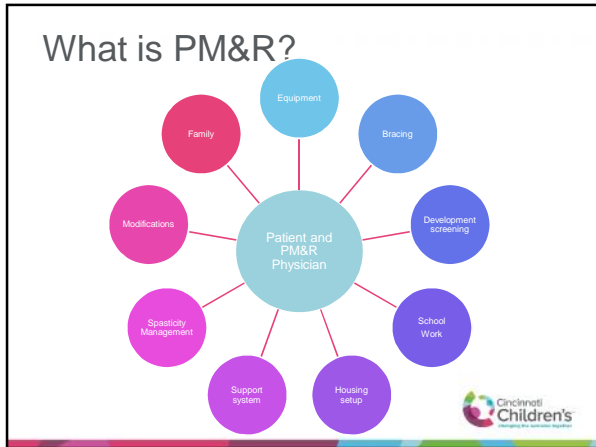


Overview

- What is PM&R
- Definition of CP
- Epidemiology
- Risk Factors
- Diagnosis
- Common Misconceptions
- Conclusion







Cerebral Palsy (CP)

“A group of disorders of the development of movement and posture, causing activity limitations that are attributed to nonprogressive disturbances that occurred in the developing fetal or infant brain”

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graph TD; Center((Patient and PM&R Physician)); Family1((Family)); Equipment((Equipment)); Bracing((Bracing)); DS((Development screening)); SW((School Work)); HS((Housing setup)); SS((Support system)); SM((Specialty Management)); Mod((Modifications)); Center --- Family1; Center --- Equipment; Center --- Bracing; Center --- DS; Center --- SW; Center --- HS; Center --- SS; Center --- SM; Center --- Mod;
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Epidemiology

- CP is the most common motor disability of childhood
- Prevalence of 3.6 cases per 1000 children



Meet Gage



Risk Factors

Prematurity

- Gestational Age
 - Born <26 wks - 12% of infants


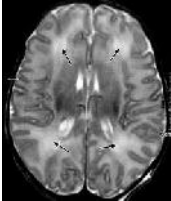
- Birth weight

Prevalence	Birth weight
1.4	>2500g
15	1500-2499g
68	1000-1499g
57	<1000g




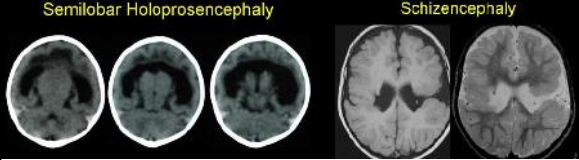
Risk Factors

- Poor APGAR scores
 - 93-95% with APGAR 0-3 do not have CP
- Neonatal Encephalopathy
 - Outcome depends on HIE severity
 - Mild: 0-3% sequela
 - Moderate: 20-35% sequela
 - Severe: universal sequela



Risk Factors

- Congenital Abnormalities:
 - More common in children with CP
- Brain Malformations: Occur during development



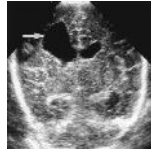
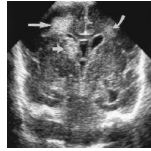
Risk Factors

- Genetic susceptibility
- Multiple Births:
 - CP risk increases w/ multiple births
 - Single 1.6/1000
 - Twins 7.3/1000
 - Triplets 28/1000



Risk Factors

- Stroke
- Intracranial hemorrhage
- Intrauterine infection
- Acquired postnatal causes



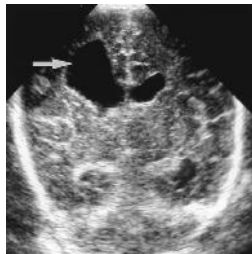
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4 Days



3.5 Weeks

Intracranial Hemorrhage



Diagnosis

- Relies upon a combination of findings, including motor delay, neurologic signs, persistence of early developmental reflexes, and abnormal postural reactions
- There are no specific tests to confirm the diagnosis of CP
- The general algorithm



Goal of Diagnosis

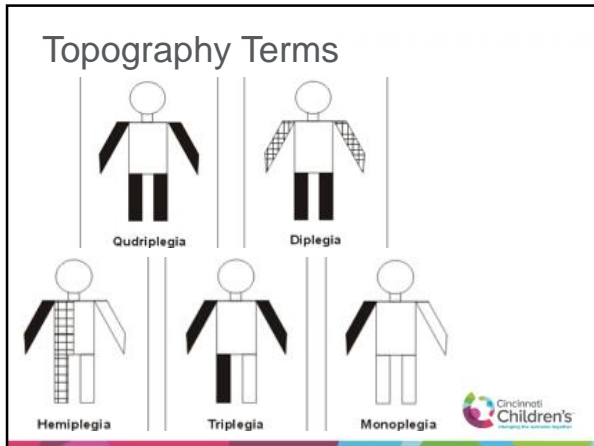
- Goal for Diagnosis and referral as early as a concern arises.
- Need for a team approach, Physical Medicine and Rehabilitation

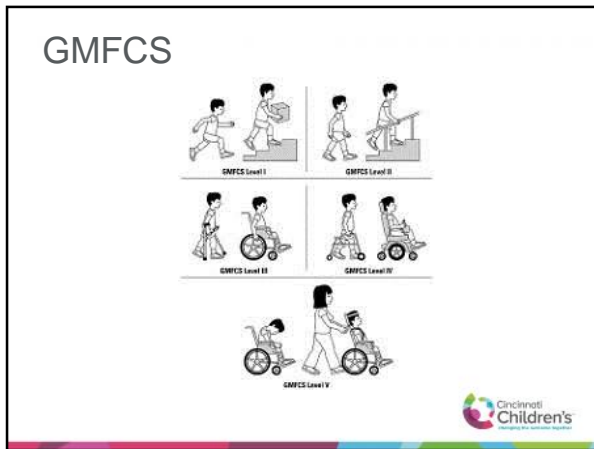


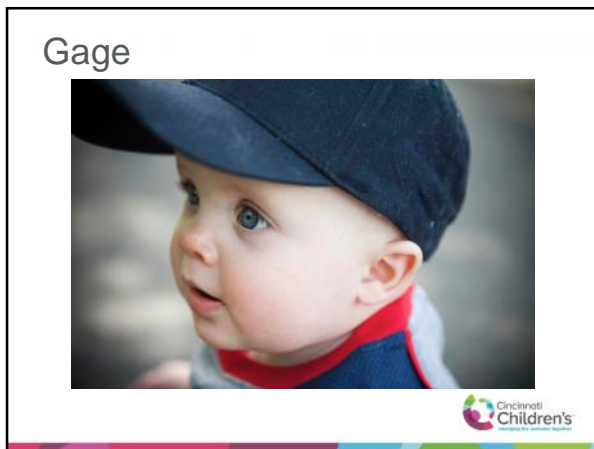
Early Signs

- Abnormal muscle tone
- Abnormal early reflexes: absent or persist longer than normal
- Abnormal movements: movement of one segment causes movement of multiple
- Early handedness











Fact vs. Fiction

- Fact: intellectual disability is present in 50% of individuals with CP



Cincinnati Children's

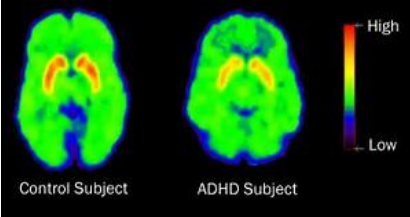
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Cincinnati Children's

Fact vs. Fiction

- Fact: 22-40% of children with CP have ADHD
- Fact: 7% of children with CP have ASD features



Cincinnati Children's

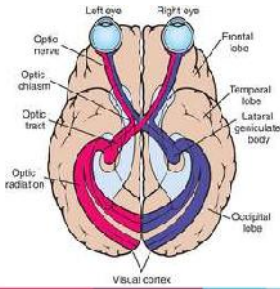
Fact vs. Fiction

- Fact: Epilepsy occurs in 25-45% of children with CP



Fact vs. Fiction

- Fact: Visual disorders are common and 80% of children can have an abnormal eye exam.



Fact vs. Fiction

Fact: Disorders of speech and language occur in 40-50% of children with CP

- Aphasia
- Dysarthria

Fact: hearing impairment occurs in 10-20% of children with CP

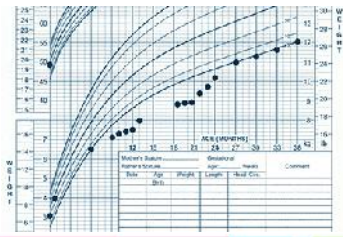


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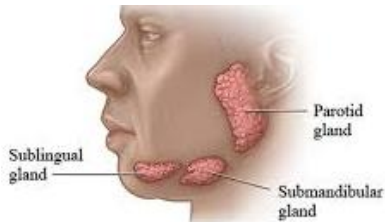
Fact vs. Fiction

- Fact: Growth failure is common with children with CP and generally correlates with severity.



Fact vs. Fiction

- Fact: 40% of children with CP have sialorrhea



Fact vs. Fiction

- Fact: Chronic pulmonary disease is a leading cause of morbidity and mortality in patients with severe CP



Fact vs. Fiction

- Fact: Orthopedic disorders are common

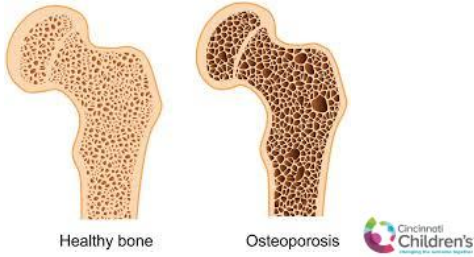


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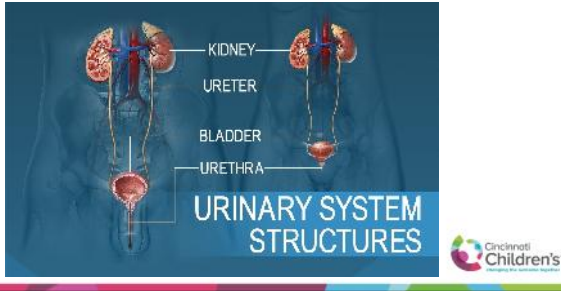
Fact vs. Fiction

- Fact: Low bone mineral density occurs in 77% of children with CP



Fact vs. Fiction

- Fact: Dysfunctional voiding symptoms are present in 30-60% of children with CP.

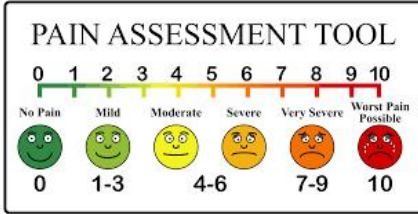


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Fact vs. Fiction

- Fact: Pain is reported in 50-75% of children with CP, and approximately 25% experience pain that limits activities



Fact vs. Fiction

- Fact: Children with CP have high rates of disordered sleep.



Cerebral Palsy (CP)

“A group of disorders of the development of movement and posture, causing activity limitations that are attributed to nonprogressive disturbances that occurred in the developing fetal or infant brain”



PM&Rs role in Cerebral Palsy

- Children (0-16 years)

The diagram consists of several interconnected hexagons, each containing a small image and a label: 'Fine motor skills' (child with blocks), 'Gross motor skills' (child on a tricycle), 'Language' (child speaking), 'Bracing' (child in a brace), 'Equipment' (child with a wheelchair), 'Vision' (child with glasses), 'Therapy and Early Intervention' (child in a therapy session), and 'Developmental Screening' (child with a developmental chart). The Cincinnati Children's logo is at the bottom right.

PM&Rs role in Cerebral Palsy

- Young Adults

The diagram consists of several interconnected hexagons, each containing a small image and a label: 'Driving' (child in a car), 'Living situation' (child in a wheelchair), 'Bracing' (child in a brace), 'Equipment' (child with a wheelchair), 'School or Work' (child at a desk), and 'Therapy' (child in a therapy session). The Cincinnati Children's logo is at the bottom right.

Questions

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