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

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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”
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
    15
    68
    57
    >2500g
    1500-2499g
    1000-1499g
    <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% sequelae
    - Moderate: 20-35% sequelae
    - Severe: universal sequelae

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

Gage

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

Fact vs. Fiction

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

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

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<thead>
<tr>
<th>PAIN ASSESSMENT TOOL</th>
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<tbody>
<tr>
<td>0</td>
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<tr>
<td>No Pain</td>
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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)
- Fine motor skills
- Gross motor skills
- Language
- Therapeutic intervention
- Equipment
- Bracing
- Vision

PM&Rs role in Cerebral Palsy
• Young Adults
- Driving
- School or Work
- Living situation
- Therapy
- Equipment
- Bracing

Questions