Spastic Cerebral Palsy

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Spastic Cerebral Palsy

• Common disorder of childhood caused by an abnormality of the brain
• Affects a child’s ability to coordinate body movements
• Often accompanied by disturbances in behavior, cognition, communication, and perception
Symptoms

- Stiff and tight muscles that cannot stretch
- Abnormal walk
  - Legs make “scissor” movements
  - Arms tucked in toward the sides
- Can affect one leg, arm, both, or an entire side of the body
- Joint contracture
- Paralysis
Brain and Nervous System Symptoms

• Mild to severe mental retardation
• Hearing and vision problems
• Dysarthria (speech problems)
• Seizures
• Pain
Diagnosis

• Electroencephalogram (EEG)
  – Used to check for epilepsy
• Brain Scans
  – Cranial ultrasound
  – CT Scan
  – MRI
• Lab Tests
  – Blood tests
  – Hearing screen
  – Vision testing
Treatment

- There is NO cure, it is a lifelong disorder
- Therapies
  - Physical therapy
  - Occupational therapy
  - Speech therapy
- Medications
  - Anticonvulsants
  - Botulinum toxin
  - Muscle relaxants
- Surgery
  - Orthopedic
  - Severing nerves
Molecular Genetics

• Through various methods, such as, linkage analysis and long-range PCR, we can find 3 different genetic variations:
  – homozygous mutation in the GAD1 gene on chromosome 2q31
  – homozygous mutation in the AP4M1 gene on chromosome 7q22.1
  – deletion of ANKRD15 gene on chromosome 9p24
• Imprinting effect inheritance
• Great example of how multiple genes give rise to the same disease
Conclusion

• The rate of cerebral palsy has not decreased
• Improvements in care have greatly improved over the last 15 years
Sources

- OMIN
- GeneReviews
- MayoClinic.com
- A.D.A.M.