Dysphagia Treatment in the Schools: Three Case Studies

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Dysphagia Identification & Treatment in the Schools: Three Case Studies

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Disclosure Statement: I have no financial interest in any commercial entity whose products or services are described, reviewed, evaluated or compared in the presentation.

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At the end of this presentation, attendees will be able to:

- understand the importance of using a team approach to addressing swallowing and feeding issues in the schools.
- identify some of the swallowing and feeding issues associated with children with cerebral palsy, Moebius Syndrome and Hunter Syndrome.
- recognize the importance of working with parents as part of their school-based interdisciplinary team.
Patricia Carbajal, M.S., CCC-SLP
What is cerebral palsy?

- General term for a group of disorders
- Usually caused by brain injuries that occur early in the development
- Affects one’s ability to coordinate body movements
- Occurrence: two to four out of every 1,000 births.
- Not curable
• What is cerebral palsy?

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Types

- Spastic – most common
- Athetoid (or dyskinetic)
- Ataxic
- Mixed
What are the symptoms?

- Lack of muscle coordination when performing voluntary movements (ataxia)
- Stiff muscles and exaggerated reflexes (spasticity)
- Asymmetrical walking gait
- Variations in muscle tone
- Excessive drooling or difficulties swallowing, sucking or speaking
- Tremors
- Difficulty with precise motions
- Symptoms usually don't worsen with age
• Intellectual Ability

• One third have mild intellectual impairment
• One third moderate or severe impairment
• One third are intellectually normal
• Half of all patients with cerebral palsy have seizures.
• Intellectual Ability

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• half of all patients with cerebral palsy have seizures - uncontrolled bursts of electricity disrupt the brain's normal pattern of electrical activity
• What are the causes?
  • Infections
  • Congenital abnormalities
  • Strokes
  • Lack of oxygen
  • Severe jaundice
  • Risk factors
Risk factors

- Premature birth
- Low birth weight
- Breech births
- Multiple babies
- Toxic substances
- Mother's health
• Complications
  - Contractures
  - Malnutrition
  - Difficulty with vision, hearing and speech
  - Dental problems
  - Mental retardation
  - Seizures
  - Abnormal sensation or perception
  - Urinary incontinence
• Treatments
  • Muscle relaxants
  • Botulinum toxin type A (Botox)
  • Physical therapy
  • Occupational therapy
  • Speech therapy
  • Orthopedic
  • Severing nerves
  • Hyperbaric therapy
• Jailen

• 5 year – 7 month old male
• Full term
• Normal pregnancy
  - with high blood pressure during the last days of pregnancy
• At birth the umbilical cord was in a true knot
• Birth Complications

• Had seizures the day he was born
• Intraventricular hemorrhage
• Developed hydrocephalus
• Required a shunt early in life
• Diagnosed with diplegic cerebral palsy (both legs)
According to his evaluation March, 2008...

- Eats pureed food - Mom puts whatever the family is eating into a food processor for Jailen
- Eats from a high chair with family
- Closes lips when swallowing
- Brings food to his mouth once it is scooped onto a spoon
- Shows likes and dislikes
- Cannot chew food
- Drinks liquids from a sippy cup or bottle
• Started school in February of 2009

• Initially 2 days a week for 2 ½ hours
• Increased to 4 days a week/half day
• Pureed food sent from home
• Ate in the cafeteria with PEI class
• Some absences
• Started drinking from a straw at school
• By the end of the year, ate cafeteria food mashed with a spoon
2009-2010 School Year

• In a PEI class all day
• Grew 7” since previous school year
• Spontaneously using 2-3 word utterances
• Minimal initiation of communication at school
• Eats the school cafeteria food, mashed
• After lunch attends a regular education preKindergarten class
• Received 2 series of hyperbaric treatments
• Started riding a adapted tricycle at school
2010-2011 school year

- Attends general education Kindergarten
- Has personal para-professional with him
- Goal: reading/math readiness skills
- Dysphagia Goal: continue safe nutritious eating
- Eats lunch in PEI classroom
- Rides bus to and from school
• Communication

• Spontaneously using 5-7 word sentences
• Makes jokes
• About 60% intelligible
• Peer communication
• Initiation increasing
• Ongoing Team Work
• Pacing of general education
• Over-stimulation
• Parent as a key member of the team
Kim S. Priola, MCD, CCC-SLP
MOEBIUS SYNDROME

- Rare neurological disorder
- Present at birth
- Primarily affects 6th and 7th cranial nerves
- Unable to move face (can’t smile, frown, suck, grimace)
- Unable to blink or move eyes laterally
SYMPTOMS INCLUDE:

- Lack of facial expression, inability to smile
- Feeding, swallowing and choking problems
- Eye sensitivity due to inability to squint
- Motor delays due to poor upper body weakness
- Absence of lateral eye movement
SYMPTOMS INCLUDE:

- Absence of blinking
- Strabismus (crossed eyes)
- Drooling
- High Palate
- Short or deformed tongue
- Limited movement of tongue
- Dental problems
- Articulation/speech disorder
**How Does It Occur?**

- Thought to be Genetic but unknown
- Sporadic
- Link recently discovered between absence of chromosome 13 and some Moebius sufferers
- Not predictable
- Causes of Moebius are not conclusive
- Always present at birth
• HOW IS IT TREATED?

• Special bottles for infants
• Feeding tube
• Strabismus is correctible with surgery
• Physical therapy
• Speech therapy
• Occupational therapy
• Limb and jaw deformities improved through surgery
• “Smile” surgery
SARITA’S HISTORY

- Entered school system at age 3
- Diagnosed OHI- Other Health Impaired
- Received Speech therapy, Occupational therapy, Physical therapy, Adapted Physical Education
- PT and APE discontinued
- Poor speech intelligibility
• **SARITA’S HISTORY**

- Normal cognitive functioning
- Attends all regular classes
- Socialization problems
- Feeding tube/Some oral feedings
- Followed by school system dysphagia team
- Dysphagia case manager = speech therapist
Sarita
• Sarita Last Year 2009-10
DYSPHAGIA TEAM GOALS

- Increase oral intake
- Use compensatory strategies for safe eating
- Increase oral motor movements
  - Work on jaw grading
  - Tongue lateralization
• **SARITA’S HISTORY** (continued)

  - Swallow study dated 7/05: severe dysphagia
    - No instances of aspiration or penetration
    - High risk of aspiration, aspiration pneumonia and/or blockage
  
  No repeated swallow study due to mom’s hesitation
• CONCERNS

• 2009-10 School year: 3 incidents of possible airway blockage at school
• No loss of consciousness
• Change in coloring
• Mother indicated no choking: only nausea
• Requested swallow study: mom declined
SARITA’S HISTORY (Continued)

- Feeding Evaluation: 8/17/10
  - Recommendations include mechanical soft and pureed foods
  - Offer formula to increase calories
  - Return in one month for possible weaning from G-tube
SARITA’S CURRENT PROGRAM

• Entered 4th grade in new school
• Swallowing/feeding plan updated
• Eats at school:
  • SLP trained personnel on feeding plan
  • School lunch is pureed
  • Mom sends high calorie smoothie
• No incidents this school year
• Parent
Emily Homer, M.S., CCC-SLP
Will and John
• **Description of Disorder**

- Hunter syndrome is a rare genetic disorder that occurs when an enzyme your body needs is either missing or malfunctioning.
- Hunter syndrome appears in children as young as age 2. It nearly always occurs in males.
- The result of gene mutations and is X linked recessive inherited disease.
- There's no cure for Hunter syndrome. Treatment of Hunter syndrome involves management of symptoms and complications.
- People with the early-onset (severe) form usually live for 10 - 20 years.
Symptoms: Juvenile form (early-onset, severe form)

- Aggressive behavior
- Hyperactivity *
- Mental function gets worse over time *
- Severe mental retardation *
- Spasticity *
- Carpal tunnel syndrome *
- Coarse features of the face *
- Deafness (gets worse over time) *
- Increased hair (hypertrichosis) *
- Joint stiffness *
- Large head (macrocephaly) *
Respiratory System

Issues which may affect swallowing and feeding

- Narrowed and abnormally shaped trachea and bronchi
- Enlarged tongue
- Hypertrophic adenoids and tonsils
- Large epiglottis
- Frequent upper respiratory infections
- Recurrent pneumonia
- Thick nasal and tracheal secretions
Treatment of Hunter Syndrome

There is no cure for Hunter Syndrome. Treatment involves management of symptoms and complications. Most children with Hunter Syndrome require the following:

- Ongoing physical therapy – joints in the limbs will stiffen and eventually the children are unable to move and are in great pain
- Speech and language – augmentative communication; basic communication skills (gestures); dysphagia
Treatment continued:

Management of the following:

- Relief for respiratory complications
- Neurological complications
- Heart complications
- Behavior management
- Sleep issues
• **Cause of Death**

  - Obstructive airway disease and/or cardiac failure associated with loss of neurologic functioning.
History of Will and John

- Referred at 3 for speech and language concerns
- Initially evaluated in 1998 in Connecticut; classified Other Health Impaired
- Started in our district in 1999; ages of 6 and 3
- Parents at that time reported a history of swallowing difficulty.
- Concerns of the Dysphagia Team were coughing and choking during meals, limited gag reflex, and overstuffing.
Initial swallowing and feeding team plan 3/17/99: Will 6 years old.

- 1:1 supervision
- Finger feeding
- Bite sized pieces
- Straw and cup drinking
- Sit upright, scoop bowl, adaptive spoon, sippy cup
- Precautions: clear oral cavity prior to offering new food; liquid after every other bite; verbal cues to chew
Choking episode in 2002

- Swallow plan becomes more specific
- Food textures become softer
- List of foods to avoid generated
- Student referred for MBSS
• **Modified Barium Swallow Study**

  - 5/23/2002 MBSS at Tulane University Hospital
    - Moderate oral and pharyngeal phase
    - Oral motor weakness
    - Incoordination, delay in trigger of swallow reflex
    - Pharyngeal muscle weakness
    - No aspiration or penetration but judges to be at risk for aspiration because of the degree of the delay
    - Extraneous movements during feeding
    - Decreased efficient mastication skills
    - Decreased ability to monitor bite and sip size
  - Recommendations: mechanical soft diet; liquids in nonspill, low flow sippy cup; 1:1 supervision during meals; upright position; compensatory small bits and sips; allow time of multiple swallows.
  - Caution: immediate liquid after bite could be a problem.
Progression of feeding skills:

- **2002**
  - Chopped, vegetables mashed
  - Thin liquids
  - 1:1 Supervision
  - Curved spoon; scoop bowl, sippy cup

- **2004**
  - 1:1 supervision 30 minutes after eating
  - Nectar thickened liquids

- **2006**
  - Honey thickened liquids
  - Added time for meals (30 add minutes)
  - Stop feeding if coughing occurs
2009

• 1:1 assistance with feeding (no independent eating)
• No spaghetti or rice
• No peanut butter

2010

• Pudding thickened liquids by spoon
• Meals completely supplied by parents
• Parents/swallowing and feeding team working together

• Involved, caring parents
• Children who are followed closely by a team of physicians
• School district whose philosophy is to maintain as “normal eating” as possible
• The medical and school teams must work together
Bibliography


DIVISION 13 ARTICLES

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