Bell’s Palsy in Children

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Objectives

1. Describe the incidence of Bell’s Palsy in children.
2. Identify common causes of facial muscle weakness/palsy.
3. Discuss criteria relevant to the identification and referral of facial muscle weakness (FMW) in children.
Bell’s Palsy

- Common condition affecting Cranial Nerve VII
- Acute, rapidly progressing, idiopathic, unilateral facial paralysis
- Generally self-limiting
- Non-life threatening
- Occurs in all age groups
Incidence

- Bell’s Palsy accounts for 40%-70% of all facial palsies
- Highest incidence in persons age 15-45
- Affects males and females equally
- 20-30 per 100,000 persons will develop Bell’s Palsy each year
  - Under age 10 = 2.7 per 100,000
  - Age 10-20 = 10.1 per 100,000
  - Age 0-14 = 6.6 per 1000,000
  - Age 15-29 – 20.1 per 100,000
Risk Factors

- Diabetes
- Pregnancy
- Flu, cold, URI
- Family history of Bell’s Palsy
- Head Injury
Recurrence

- Reoccurs in 7% to 9% of all patients
- Person with family history and diabetes more likely to have recurrence
- Average time span between recurrences is 10 years
- Wong (1995) reported a recurrence rate of 25% in children
Causes

- Irritation or damage to Cranial Nerve VII
- Direct cause unknown or idiopathic
Pathological Causes:

- Vascular entrapment
- Autoimmune responses
- Infectious diseases
  - Herpes SV-1 [79%]
  - HIV
  - Varicella-Zoster Virus [children age 6-15]
  - Lyme [half of cases in children]
Conditions Presenting with Facial Palsy in Children

• Bell’s Palsy (42%)
• Trauma (21%)
  – 90% from longitudinal fracture to temporal bone
• Infection (13%)
  – 50% may be from Lyme Disease
• Congenital causes (8%)
• Neoplasm (2%)  
  [ May, et al. (1981) ]
Clinical Manifestations of Bell’s Palsy

- Sudden onset
- Rapid progression
  - Maximal weakness within 48 hours
- Unilateral facial muscle weakness
  - Complete or incomplete
- Drooling
- Inability to close one eye
- Excessive tearing or dry eye
- Loss of taste
- Earache
Diagnosis

- No consensus on approach
- Thorough clinical exam
  - All students with FMW must be referred for evaluation
- Diagnosis of exclusion
- Blood counts to exclude leukemia
- Serology to exclude Lyme Disease
- MRI or CT scans to exclude stroke, neoplasms, etc.
Prognosis

• Nerve function is most important factor
  – 85% return to normal functioning in 3 weeks
  – 15% within 3-5 months
  – Small percentage have permanent facial nerve damage
  – 88% of children have full recovery (Wong, 1995)
Poor Prognosis Indicators:

1. Complete facial palsy
2. No recovery within 3 weeks
3. Over age 60
4. Severe pain
5. Ramsey Hunt Syndrome (Herpes Zoster Virus)

1. Severe degeneration of facial nerve
2. Palsy Associated conditions:
   1. Pregnancy
   2. Diabetes
   3. Hypertension
Treatment

• Most people recover without medical intervention

• Treatment approaches focus on:
  1. Speeding recovery
  2. Protecting the cornea
  3. Emotional support
Speeding Recovery

• Research suggests most likely cause is viral infection and inflammation of Cranial Nerve VII

• Oral antivirals [possibly effective]

• Corticosteroids [probably effective]
  – Early treatment within 72 hours to inhibit viral replication and nerve inflammation

• Antibiotic treatment for Lyme Disease
Protecting the Cornea

- Inability to fully close the eye can cause the eye to dry out and lead to permanent vision damage
  - Lubricating drops
  - Eye patch
  - Taping the eye during sleep is not suggested for children because it can result in corneal injury
- Tape may become dislodged during sleep
Emotional Support

  - Negative facial self image (80%)
  - Difficulty with face-to-face conversation (39%)
  - Perceived change in people’s attitudes toward them (60%)

- No studies in Childhood Bell’s Palsy
  - May have significant psychological and developmental impact on child and family
Bell’s Palsy:

- Event that sets children apart from peers
- Facial changes can lead to stigmatization → Child teased or taunted
- Recovery takes weeks or months
- Small percentage of children suffer permanent FMW
- The more severe the facial palsy → more emotionally and socially devastating
Role of the School Nurse in Early Recognition and Referral

- School nurse may be the first to evaluate FMW
- Exam should focus on the urgency of referring a school age child presenting with FMW
- Tools are needed to facilitate history, physical exam and referral decisions
  - see handout
Referral Categories

• Urgent referral to primary health provider [student should be seen within 2 hours]

• Emergent referral to primary health provider or local emergency room.
Focused History and Exam

- Date and time of onset
- Record subjective statements
- Evaluate for FMW
  - Muscle movement:
    - Affected side will have minimal or no movement
    - Unaffected side will move normally
  - Facial sensory loss should not be evident
    - Indicates emergent referral
• Initiate protective measures if eye does not close completely

• Temperature
  \[ \geq 103 \] indicates emergent referral
  Recent Hx otitis media indicates emergent referral

• Blood pressure
  Elevated \( > \) indicates emergent referral

• History of head trauma [within 2-21 days]
  Emergent referral
Facial Muscle Weakness Can Be Indicative of Life Threatening Conditions

- All persons presenting with Facial Muscle Weakness must be referred for further evaluation and diagnosis
• A focused history and exam by the school nurse is essential in determining if children presenting with Facial Muscle Weakness should be considered urgent or emergent.

• Valid and Reliable tools are needed
References


