



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.

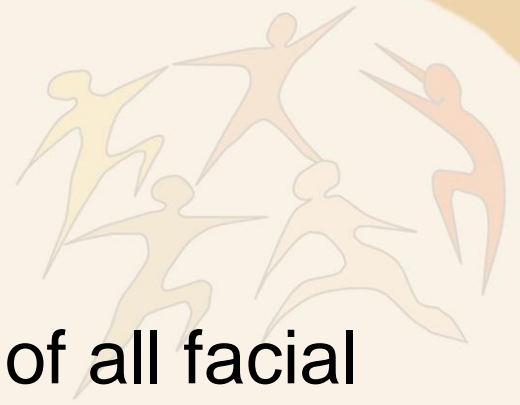


Bell's Palsy



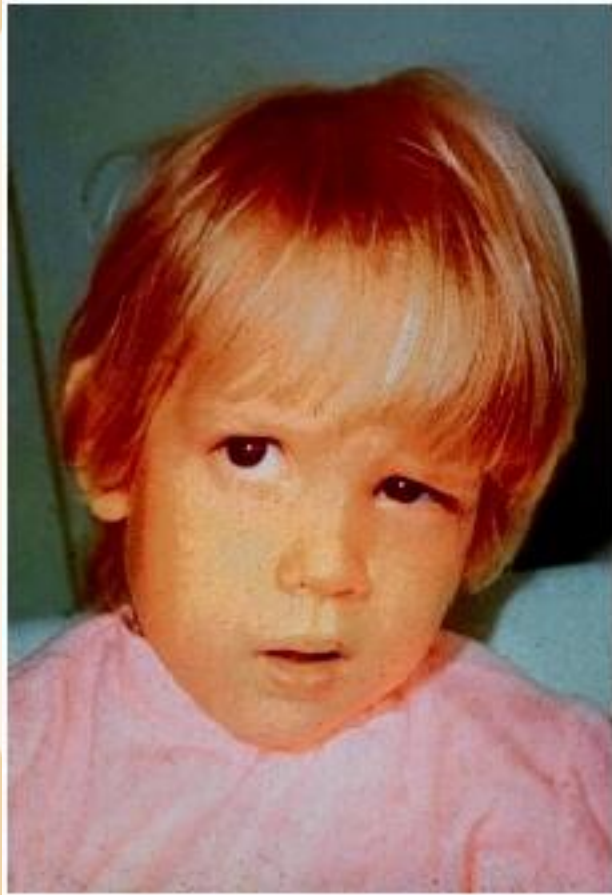
- Common condition affecting Cranial Nerve VII
- Acute, rapidly progressing, idiopathic, unilateral facial paralysis
- Generally self-limiting
- Non-life threatening
- Occurs in all age groups

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

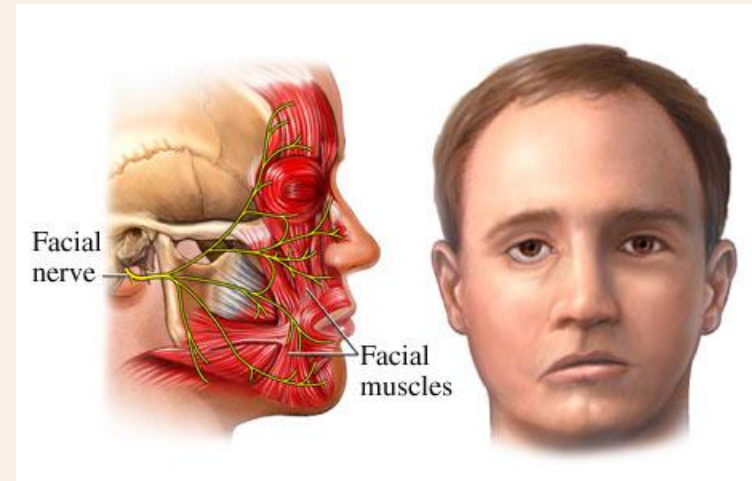


- Reoccurs in 7% to 9% of all patients
- Person with family history and diabetes more likely to have recurrence
- Average time span between recurrences is 10 years
- Wong (1995) reported a recurrence rate of 25% in children

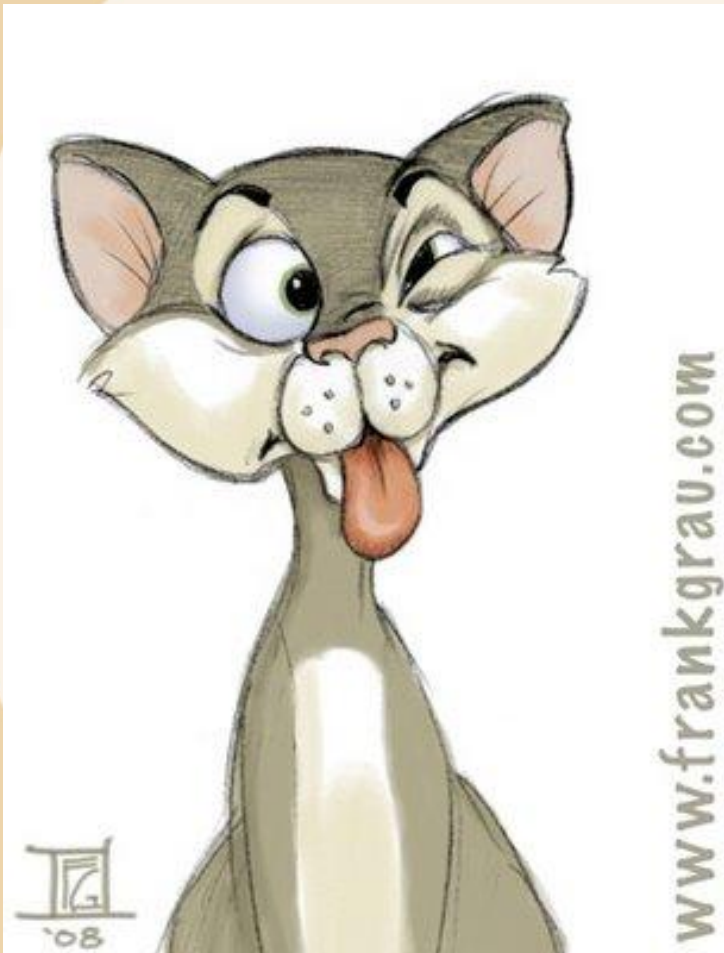
Causes



- 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

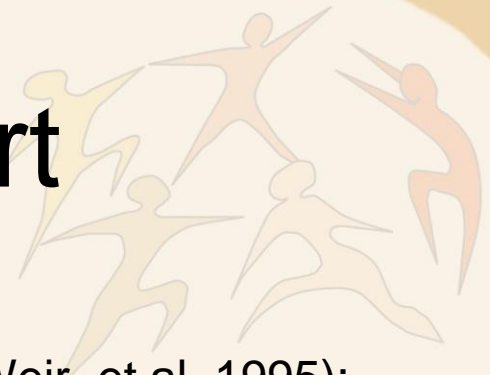
A decorative graphic in the top right corner consisting of several stylized human figures in various poses, rendered in shades of orange and yellow, suggesting movement and recovery.

- 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



- **Changes in facial appearance** (Weir, et al, 1995):
 - 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

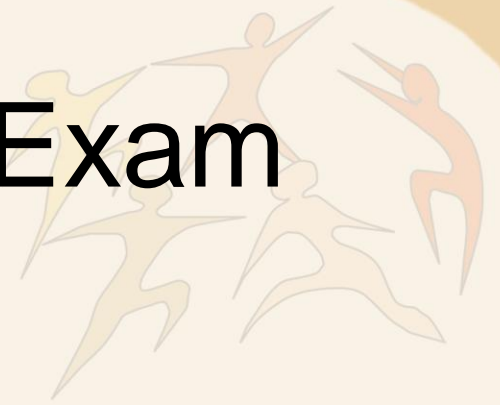
- School nurse may be the first to evaluate FMW
- Exam should focus on the urgency of referring a school age child presenting with FMW
- Tools are needed to facilitate history, physical exam and referral decisions
 - see handout

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
 - ≥ 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

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