Unusual Presentations of Child Abuse

WI CAN Educational Series
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Disclosure Information for:
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Unusual Presentations of Child Abuse

• Child abuse manifests in many different forms.
• Abuse may be missed without a high index of suspicion.
• A multi-disciplinary response is crucial to protection in these cases. A child's disclosure may be the only evidence of abuse.
• Medical providers with specialized training/experience in child abuse pediatrics are available.

Key Points
Forced Ingestion and Poisoning

Forced Ingestions

- May or may not be associated with injury to the:
  - Mouth
  - Face
  - Neck
  - Nose
- Risk based on anatomy:
  - Esophagus
  - Trachea
- Scene investigation = crucial

“Saucing”

- Caregiver forcing a child to ingest hot sauce as punishment
- Primary irritant = capsaicin
  - Inflammation of eyes, nose, and mouth
- Risk of allergy, aspiration, swelling
Pepper

- Caregiver forcing a child to ingest pepper
- Primary irritant = piperine
  - Hyperemia of mucosa
- Risk of airway occlusion, spasm, aspiration, swelling

Salt Poisoning

- Sodium (Na)
  - Hyponatremia < 135
    - Normal = 135-145 mEq/L
    - Hypernatremia > 145
- Typically presents with:
  - Unexplained hypernatremia
  - Vomiting, diarrhea, THIRST
  - Seizures, apnea, coma, hemorrhagic encephalopathy, death

Salt Poisoning

- Salt poisoning:
  - Excess salt
  - Weight loss or gain
  - FENa ↑
    - Previous episodes of hypernatremia
    - Other signs of abuse
- Dehydration:
  - Inadequate fluids
  - Weight loss
  - FENa normal
**Forced Water Intoxication**

- Typically presents with:
  - Hyponatremia
  - Nausea, vomiting
  - Cerebral edema → headache, lethargy, agitation
  - Seizures, coma, death
- Treatment:
  - Slow correction to prevent brain injury

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**Poisoning**

- Cases/year of "malicious" exposures in children <7 yo:
  - Non-pharmaceutical = 450
    - 4 deaths
    - 178 moderate/major outcomes
  - Pharmaceutical = 160
    - 18 deaths
    - 172 moderate/major outcomes

(Yin 2010, 2011)

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<table>
<thead>
<tr>
<th>Non-pharmaceutical Exposures</th>
<th>Pharmaceutical Exposures</th>
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<tr>
<td>1. Cleaning substances</td>
<td>1. Analgesics</td>
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<tr>
<td>2. Cosmetics/personal care products</td>
<td>2. Stimulants/street drugs</td>
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<td>4. Unknown</td>
<td>4. Cold and cough preparations</td>
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<tr>
<td>5. Foreign bodies</td>
<td>5. Unknown</td>
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<td>6. Alcohols</td>
<td>6. Ethanol</td>
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<td>7. Hydrocarbons</td>
<td>7. Topical preparations</td>
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<td>8. Lacrimators</td>
<td>8. Gastrointestinal preparations</td>
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<td>10. Deodorizers</td>
<td>10. Antidepressants</td>
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</tbody>
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(Yin 2010, 2011)
Burns

Microwaves
- Mechanism = thermal
- Most burns: skin > fat > muscle
  vs.
- Microwave burns: skin, muscle > fat
- May also be used to heat liquids that cause burns

Stun Guns
- Deliver high voltage electric shock via direct contact
- Causes:
  - Muscle tetany, numbness, confusion, loss of balance
  - Pair of symmetric circular burns 0.5 cm in diameter, 5 cm apart
Tasers
• Deliver high voltage electric shock via fired metal prongs
• Causes:
  Muscle tetany, numbness, confusion, loss of balance
  Puncture wounds and burn injury

Bruising and Bleeding

Hemotympanum
• Collection of blood behind the tympanic membrane
• May be associated with basilar or temporal bone fracture
• Risk of:
  Perforation
  Hearing loss
  Deformity

Evans 2016
**Subgaleal Hematoma**
- Bleeding between scalp and skull caused by violently pulling a child's hair
- Presents with:
  - Boggy scalp swelling
  - Tenderness
- May also result in traumatic hair loss

**Traumatic Alopecia**
- Hair loss caused by inflicted hair pulling
- Underlying scalp normal or petechial bruising
- May be associated with subgaleal hematoma

**Sublingual Hematoma**
- Bruising underneath the tongue caused by blunt force trauma
- May present with:
  - Intraoral mass/swelling
  - Bruising
  - Tongue deviation
  - Respiratory distress
- May be associated with mandible fracture
Subungual Hematoma

- Bleeding under the fingernail usually caused by trauma
- May present with:
  - Nail discoloration
  - Pain
  - Swelling
- Complications include:
  - Infection
  - Nail deformity/loss

Restraints

- May present with:
  - Abrasions
  - Bruises
  - Indentations
  - Swelling
  - Scars
- May be unilateral or bilateral, +/- circumferential

Restraints to the Neck

- May present with:
  - Petechiae distally
  - Vertical abrasions
  - Subconjunctival hemorrhage
  - Normal exam
- Diagnosis of strangulation based on disclosure and symptoms
Restraint Mimic

• Elastic band injury
  - Tissue ischemia caused by pressure from clothing
  - Typically present with hyperpigmented, curvilinear lesions on calves

Subconjunctival Hemorrhage

• Uncommon in children
• May be caused by:
  - Blunt force trauma
  - Asphyxiation/strangulation
• DDx:
  - Birth
  - Pertussis

Genital Care

• Variation based on parent experience and societal norms
• Inappropriate:
  - Painful or excessive washing of genitalia
  - Frequent inspections of genitalia
  - Application of “medicines” for genital problems
Nasal Care

• Inappropriate:
  - Using implements to clean the nose
  - Causing pain or injury
• May result in the destruction of the nasal septum and/or columella

 Forced Dental Extraction

• Intact teeth removed from a child’s mouth as punishment
• Risk of infection, deformity, speech/feeding difficulties

Torture

• Longitudinal experience characterized by:
  - ≥2 physical assaults OR one extended assault
  - ≥2 forms of psychological maltreatment
  - Neglect resulting in:
    - Prolonged suffering
    - Permanent disfigurement or dysfunction
    - Death

Carrotte 1990
Knox 2014
**Insertions**

- Sharp object such as needle or tack inserted into a child
- May cause inflammation/swelling, hemorrhage, infection
- Diagnosis: X-ray if radio-opaque
- Treatment: surgical removal, management of complications

**Forced Exercise/Position Holding**

- Caregiver forcing a child to exercise or hold a position for extended period of time
- May present with:
  - Heat stroke
  - Elevated CPK
  - Rhabdomyolysis
  - Change in growth pattern

**Retropharyngeal Injury**

- May present with:
  - Bleeding from the mouth
  - Difficulty breathing or swallowing
  - Infection
  - Subcutaneous air
- Typically requires endoscopic visualization for diagnosis
Pulmonary Pseudocyst
- Air-, blood-, or fluid-filled spaces in the lungs
- Caused by blunt force trauma to the chest
- May present with:
  - Chest pain
  - Hemoptysis
  - Shortness of breath

Chylothorax
- Chyle in the space around the lungs
- Caused by traumatic rupture of the thoracic duct
- May present with:
  - Respiratory distress
  - Immunodeficiency
  - Malnutrition

Adrenal Injury
- May present as contusion, hemorrhage, and/or laceration
- Caused by blunt force trauma to the torso
Take-Home Points

• The sky's the limit.

• Think about abuse early and often.

• Listen to the child.

• We are here to help!

References


References
