

## **The Viewing Study Guide for Physical Abuse Slides**

Adapted From  
The Visual Diagnosis of Non-Accidental Trauma and Failure to Thrive  
A Study Guide  
By  
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in Cooperation with  
The American Academy of Pediatrics

1979

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## Introduction and Acknowledgments

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The viewing guide was updated and adapted to accompany the new slides available from The American Academy of Pediatrics. A few of the previous slides, which are included in the new slide script, and the script are available from The Institute for Human Services, Columbus, OH. These are available for the cost of reproduction.

## The Study and Note-Taking Guide

### **INFLECTED BRUISES**

#### 1. *Typical Sites*

- Buttocks and lower back (paddling)
- Genitals and inner thighs
- Cheek (slap marks)
- Ear lobe (pinch marks)
- Upper lip and frenulum (forced feeding)
- Neck (choke marks)

#### 2. *Human Hand Marks (Pressure Bruises)*

- Oval grab marks (finger tips)
- Trunk encirclement bruises
- Knuckle marks
- Linear marks (fingers)
- Hand print
- Pinch marks

#### 3. *Human Bite Marks*

#### 4. *Patterned Marks*

- Points of a wire brush
- Linear bruises (belts or whips)
- Loop mark bruises (doubled over cord)

### 5. *Bizarre Marks*

- Blunt instrument bruises - specific shapes
- Tattoos, fork tine punctures
- Circumferential tie marks (ankle, wrist)
- Gag marks
- Sucking lesions

### 6. *Multiple Bruises at Different Stages of Healing*

## **NORMAL BRUISES**

- Facial scratches in babies from long fingernails
- Knee and shin bruises
- Forehead bruises
- Bruises over bony prominences

## **Dating of Bruises**

The rate of healing of bruises depends on:

- The depth of the bruise
- The amount of bleeding in the tissue
- The amount of circulation available to the bruised area

Generally, bruises progress through a series of color changes as the acute inflammation subsides, the red blood cells break down, and the hemoglobin breaks down. Colors change from red to blue, green, yellow, and brown before clearing. Since there is so much variability in the speed of this progression, it is probably safest to describe bruises as either "new" (red, purple, or blue) or "old" (green, yellow, or brown).

## **Conditions often confused with bruises:**

- Idiopathic Thrombocytopenic Purpura (ITP)

- Clotting disorders, such as hemophilia and Von Willebrand's disease
- Ehler-Danlos Syndrome
- Mongolian Spots

**Cultural/medical practices often confused with bruises:**

- Moxibustion
- CAO GAO (coining)
- Cupping
- Bleeding – not in slide presentation
- Facial Marking – not in slide presentation

**INFLECTED BONE INJURIES**

1. Usual fractures
2. Chip fractures (of metaphysis)
3. Spiral fractures
4. Bucket handle fractures (of metaphysis)
5. Subperiosteal bleeding and calcification
6. Fractures at different stages of healing
7. Repeated fractures to same site
8. Unusual fractures (ribs, scapula, sternum)

**Conditions or cultural/medical practices often confused with bone injuries:**

Rare bone diseases, such as brittle bone disease

## **INFLECTED BURNS**

1. Scalding
2. Extremities held over gas flame
3. Cigarette Burns
4. Match Tip or Incense Burns
5. Dry Contact Burns (From forced contact with heating devices)
  - Heating grate
  - Electric hot plate
  - Radiators
6. Branding Burns (from touching with heated metals) - specific shapes
7. Scalds From Forced Immersion
  - Buttocks and Perineum (Dunking Burns)
  - Glove or Stocking Burns

Reference: Feldman, K.W. et.al. "Tap water scald burns in children." *Pediatrics*, 62: 1, 1978.

### **Conditions or cultural/medical practices often confused with burns:**

Bullous impetigo

Scalded skin syndrome

## **INFLECTED SUBDURAL HEMATOMAS**

### **The head can be injured at several levels:**

- a. Scalp lacerations, bruising, and hair pulling.
- b. Subgaleal hematomas (bleeding under the scalp)

- c. Cephalohematoma (bleeding under the external surface of the skull)
  - d. Skull fractures
  - e. Epidural hematomas
  - f. Subdural hematomas
  - g. Subarachnoid hemorrhage
  - h. Brain contusions, shearing tears, herniation
  - i. Interventricular hemorrhages
1. *From Direct Blows*
    - Skull fractures
    - Scalp swelling and bruises
    - Retinal hemorrhages
  2. *From Violent Shaking*
    - No skull fractures
    - No scalp swelling or bruises
    - Retinal hemorrhages
    - Long bone fractures (25%)
  3. *Subdural Hematomas Are Never Spontaneous*
  4. *Subdural Hematomas in Babies Are Inflicted Until Proven Otherwise*

### **INFLECTED HEAD INJURIES**

1. Subdural Hematomas
2. Subarachnoid Hemorrhages

3. Scalp Bruises from Direct Trauma
4. Subgaleal Hematoma and/or Traumatic Alopecia (hair loss, bald spots)
5. Black Eye

### **INFLECTED ABDOMINAL INJURIES**

1. Ruptured liver or spleen
2. Intestinal perforation
3. Intramural hematoma of duodenum or proximal jejunum
4. Ruptured blood vessel
5. Injury to pancreas
6. Injury to kidneys

### **DIAGNOSTIC CRITERIA FOR FAILURE TO THRIVE DUE TO UNDERFEEDING**

1. Underweight condition
2. Failure to gain weight at home
3. Rapid weight gain out of the home
  - 2 oz/day sustained for one week or a striking gain compared to a similar interval at home
4. Ravenous appetite
5. Deprivational behaviors

### **HISTORIES OFFERED FOR INFLECTED INJURIES**

1. Eyewitness History
  - Child accuses an adult
  - One parent accuses the other



- One parent confesses
- 2. Unexplained injury
- 3. Implausible history
- 4. Alleged self-inflicted injury (to child not old enough to crawl)
- 5. Alleged sibling inflicted injury
- 6. Delay in seeking medical care