Advanced Pediatric Emergency Medicine Assembly

March 23-26 2015
New York, NY

10 Little Fingers, 10 Little Toes

Anyone who has cared for a toddler with a smashed finger or school aged child with an inflamed toe can attest to the fact that these “little” issues can often produce a great degree of distress for provider and patient alike. In this session an expert lecturer will discuss when to repair a nailbed/replace an avulsed nail, treatment of common phalanx fractures, antibiotics (or not) for tuft fractures, subungual hematomas, management options for paronychia, and hair tourniquets, and must not miss diagnoses such as Seymour fractures, Herpetic Whitlow and felon's will be discussed with a smattering of the latest “tricks of the trade”.

OBJECTIVES
- Identify phalanx injuries at risk for associated Seymour fracture
- Discuss the evidence for and against nailbed repair and prophylactic antibiotics for tuft fractures
- Explain management options for paronychia, hair tourniquets, and subungual hematomas
- Recognize Herpetic Whitlows and initiate appropriate treatment

3/24/2015
4:30 PM-5:00 PM
Grand Ballroom
TU-8

DISCLOSURES:
(+) No significant financial relationships to disclose
Ten Little Fingers, Ten Little Toes?

Advanced Pediatric Emergency Medicine Assembly
March 24-26, 2015

Disclosures

• No financial disclosures
Learning Objectives:

By the end of this lecture the learner will be able to:

• Discuss indications for removal of a nail for subungual hematoma and antibiotics for tuft fractures

• Discuss management options for mallet finger and recognize injuries at risk for associated Seymour fracture

• Identify multiple “named” conditions in fingers and toes commonly seen in pediatric patients

11 yo ♀ 4th finger vs car door
12 yo ♂ hockey player struck by puck on fingertip

Increasing swelling/pain

~ 30%
Subungual Hematoma

7 yo ♀ severe autism crush Injury > 20 hrs
Controversies?

- How should we manage these injuries?
- Does the nail need to be removed?
- Antibiotics?
- Immobilization?
Nailbed Anatomy

- Cuticle
- Lunula
- Hyponychium
- Paronychium
- Eponychium
- Nail fold
- Nail matrix
- Nail plate
- Nail bed (Sterile Matrix)

Nailbed Anatomy

- Germinal Matrix
- Dorsal Root
- Extensor Tendon
- Sterile Matrix
- Lunula
- Eponychium
- Hyponychium
- Periosteum
- Ventral Floor
- Flexor Tendon
Comparison of Nail Bed Repair Versus Nail Trephination for Subungual Hematomas in Children

Steven E. Roser, MD, Harris Gellman, MD, Little Rock, AR

Pediatric Fingertip Injuries
Do Prophylactic Antibiotics Alter Infection Rates?

Caroline Altagott, MD, Francisco J. Garcia, MD, and Alan L. Nager, MD

Fingertip–Nail Bed Injuries in Children: Current Concepts and Controversies of Treatment

Harris Gellman, MD

Trephination
10 yo ♂ “jammed fingertip” playing basketball

Mallet Finger

- Injury of the extensor mechanism of the DIP
- Forced flexion or axial load on extended DIP
- Soft tissue vs bony
- Exam – pain and extensor lag
Mallet Finger Treatment

STACK SPLINT

ALUMINUM SPLINT

OVAL-8 FINGER SPLINT

Lateral band relaxed in this position; correct for splinting of “mallet finger”

Mallet Finger Treatment
Simple Mallet or more?

• 10 yo ♂ “jammed” thumb from football

JUXTA-EPIPHYSIAL FRACTURE OF THE TERMINAL PHALANX OF THE FINGER

N. Seymour, Sheffield, England

From the Orthopaedic Department, Royal Infirmary, Edinburgh, Scotland
Seymour Fracture
Missed Seymour Fracture

Missed Seymour Fracture
Just a sprain?

- 7 yo ♀ jumps off chair, catching little finger on edge of desk.
- Swollen and bruised at base of finger
- “You’re okay honey – go practice your piano.”
- “Daddy – it hurts too much when I try and play.”

Extra Octave Fracture

- Salter Harris II fracture – base of proximal phalanx
- Abduction injury
- Ulnar deviation of finger ± extension
Just a sprain?

- 9 yo ♀ riding bike (with helmet on) hits curb, injuring thumb on handlebars
- Swollen and bruised at base of thumb
- “You’re okay honey – go practice your piano.”
- “Daddy – it hurts too much when I try and play.”
**Skier’s Thumb** (Ulnar Collateral Ligament Avulsion Fx)

- Cause by forced abduction of the thumb
- Skeletally immature
  - Avulsion fracture of insertion site of UCL
  - Salter Harris III
- Leads to instability of MCP joint and ↓ grip strength
  - Exam - flex MCP, abduct finger)
- Rx – Usually surgical

**Pseudo-skier’s Injury**

- Salter Harris I or II fracture
- Exam shows apparent MCP joint instability
- Due to movement at the physis, not UCL avulsion
Jersey Finger

Testing the FDS and FDP Tendons

- Flexor Digitorum Profundus (FDP)
  - Isolate DIP
- Flexor Digitorum Superficialis (FDS)
  - Isolate PIP
Testing the FDS and FDP Tendons

- Flexor Digitorum Profundus (FDP)
  - *Isolate DIP*

- Flexor Digitorum Superficialis (FDS)
  - *Isolate PIP*

Jersey Finger - Anatomy
Examination pearl - Tenodesis

Acute vs Chronic Paronychia
Acute vs Chronic Paronychia

- **Acute: Medical Management**
  - Warm soaks
  - Antibiotics
  - *Obvious pus → drainage*

- **Chronic: Surgical Management**
  - Partial or complete nail removal
  - Matrix ablation
    - Silver nitrate or Phenol
    - *Antibiotics*

Felon

- [Image of a felon]
2 y.o. thumb sucker

Herpetic Whitlow

Herpetic Whitlow
Fussy Baby

Why didn’t I think of that?

Effect of a Depilatory Agent on Cotton, Polyester, and Rayon Versus Human Hair in a Laboratory Setting

Jocelyn A. Piesa, MD*; Kelly Shoup, BSN; Miroara D. Maroile, MD; Robert W. Hickey, MD
Is there a “Fungus Amongus?”

Granuloma Annulare
Final Finger Condition

Final Finger Condition
Oral Therapy Recommended

References

Fingernail and Fracture References

References


Miscellaneous References


References

**Digital Blocks**


**Toenail**

  

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References