Minor Office Procedures

Fairview Hospital Surgical Operations

Cleveland Clinic Express Care


Are you a
"popaholic"?

Objectives

- Describe and review pathophysiology of abscesses.
- Describe and review treatment of abscesses.
- Describe and review the fundamentals of incision and drainage (I&D) indications, contraindications, equipment and procedure.
- Discuss and review complications of I & D.
- Discuss and review aftercare instructions for I & D procedure.
- Discuss and review documentation of procedure.

Introduction

- An abscess is a confined collection of pus surrounded by inflamed tissue
- Most abscesses are found on the extremities, buttocks, breast, axilla, groin, and areas prone to friction or minor trauma (may be found in any area of the body)
- Formed when the skin is invaded by microorganisms
- Cellulitis may precede or occur in conjunction with an abscess
- Two most common microorganisms leading to abscess formation are *Staphylococcus* and *Streptococcus*
- Perianal abscesses are commonly caused by enteric organisms.
- Gram-negative organisms and anaerobic bacteria also contribute to abscess formation

Introduction

- Treatment is primarily through incision and drainage (I&D)
- Smaller abscesses (<5 mm) may resolve spontaneously with the application of warm compresses and antibiotic therapy
- Larger abscesses will require I&D due to an increase in collection of pus, inflammation, and formation of the abscess cavity, which lessens the success of conservative measures
- Untreated abscesses:
  - The abscess may remain deep and slowly reabsorb, or the abscess may spontaneously rupture and drain.
  - Deep extension into the subcutaneous tissue may be followed by sloughing and extensive scarring.
  - (Rare) May lead to systemic infection/sepsis.

Equipment

- Universal precaution materials (gown, gloves, protective eyewear)
- Draping towels and gloves (considered a clean procedure in most areas)
- Local anesthetic (1% or 2% lidocaine most commonly used)
- 10-cc syringe with splashguard
- Needles for drawing up anesthetic (18 ga) and injection (25-30 ga)
- Skin prep material (chlorhexidine [Hibiclens] or iodine swabs)
- No. 11 or 15 blade and scalpel
- Curved hemostats
- Scissors
- Packing (plain or iodoform) ribbon gauze
- Dressing (4× 4 gauze pads and tape)

Indications

- Palpable, fluctuant abscess
- An abscess that does not resolve despite conservative measures
- Large abscess (>5 mm)

Contraindications

- Extensively large or deep abscesses or perirectal abscesses (may require surgical debridement and general anesthesia)

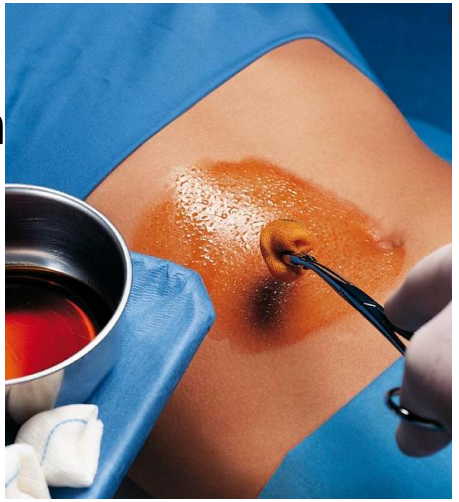
- Facial abscesses (cosmetic concerns)

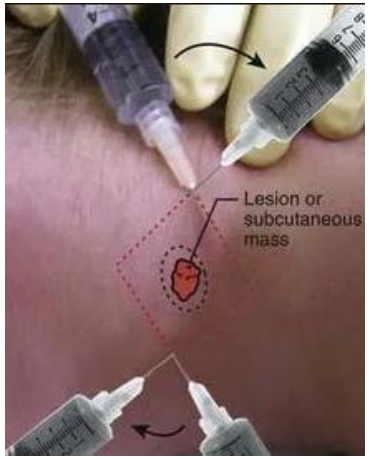
- Hand and finger abscesses (consider surgical or orthopedic consultation)

- Abscesses overlying major vessels
- Caution with immunocompromised patients and diabetic patients (may require more aggressive measures and follow-up)

Procedure

- Perform Time Out
- Explain the procedure, its risks, and benefits to the patient. Warn of potential cosmetic concerns. Obtain informed consent
- Clean the surface of the abscess and surrounding skin
- Drape the abscess and surrounding area
- Anesthetize the area by infiltrating local anesthetic around and under the tissue surrounding abscess (field block)

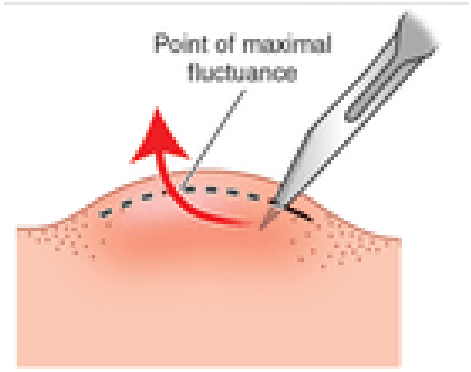




- *Caution*: Abscess environment is acidic (local anesthetics may be less effective). Use an appropriate amount of anesthetic, allow adequate time for anesthetic effect.
- *Caution*: Injection into the abscess cavity can cause increased pain, abscess may rupture deeper into subcutaneous surface

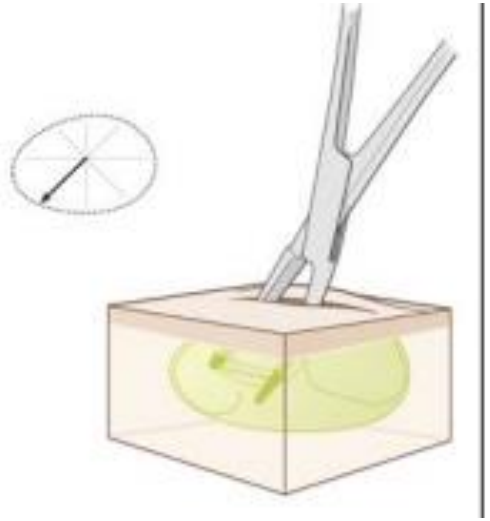
Procedure

- Make a linear incision with a # 11 or 15 blade into the abscess
- *Caution:* The most common cause of abscess reoccurrence is an incision not large enough to promote adequate drainage
- *Caution:* Contents of the abscess may rupture upward and outward toward the provider (Goggles/Face shield/Mask!)



Procedure

- Allow purulent material from the abscess to drain. Encourage drainage by manually expressing. Gently probe the abscess with curved hemostats to break up loculations (the compartmentalization of a fluid filled cavity into smaller spaces [locules] by fibrous tissue)
- Consider culture and sensitivity testing



Procedure

- If cavity is large, insert packing material with hemostats or forceps. Dress the wound with gauze and tape

After Care Instructions

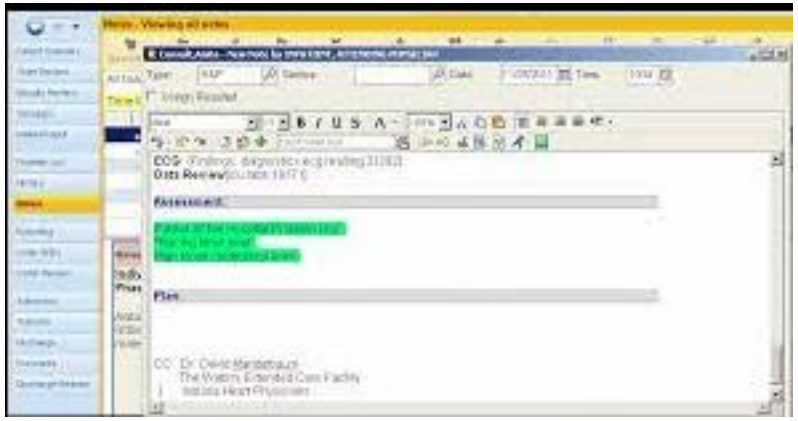
- Keep the wound clean, dry, and covered with dressing.
- If not packed, warm compresses or soaks several times daily to promote drainage.
- Packing material should be removed and site repacked every 1 to 2 days until the cavity has resolved and packing material can no longer be inserted.
- Change the dressing once a day or anytime it becomes soaked or soiled.
- May take over-the-counter pain relievers as needed for pain.
- Review signs/symptoms of infection/reoccurrence.

Complications

- Inadequate anesthesia
- Pain during/after the procedure
- Bleeding
- Reoccurrence of abscess
- Septic thrombophlebitis
- Necrotizing fasciitis
- Fistula formation
- Damage to nerves and vessels
- Scarring

Documentation

- After consent obtained and time out procedure performed, skin was cleansed with ***. *** cc of 1% lidocaine was injected using field block technique and incision made with *** blade scalpel. A *** amount of purulent drainage was expressed. Culture swab obtained. Site packed with approximately *** cm of packing material. A dry sterile dressing was applied. Patient tolerated procedure well.



Procedure video

- https://5minuteconsult.com/collectioncontent/30-156244/procedures/incision-and-drainage-of-abscesses

References

- Wimberly, H. (2022). Incision and Drainage of Abscesses | Procedures | 5MinuteConsult. Retrieved 26 April 2022, from https://5minuteconsult.com/collectioncontent/30-156244/procedures/incision-and-drainage-of-abscesses
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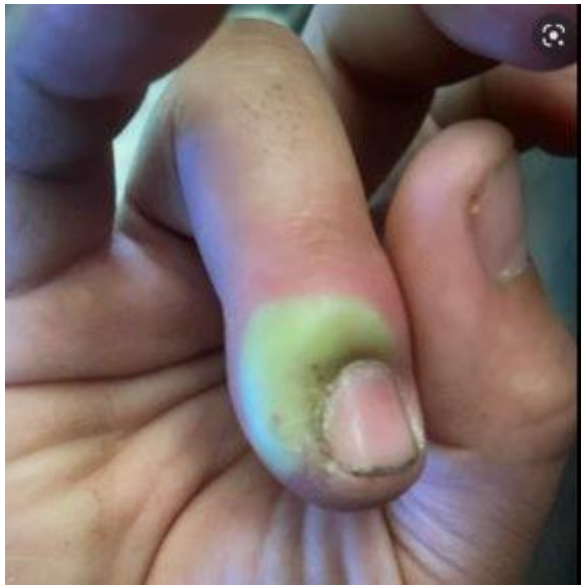
Any
Questions

Objectives

- Describe and review pathophysiology of paronychia.
- Describe and review treatment of paronychia.
- Describe and review the fundamentals of paronychia drainage indications, contraindications, equipment and procedure.
- Discuss and review complications of paronychia drainage.
- Discuss and review aftercare instructions for drainage procedure.
- Discuss and review documentation of procedure.

Definition

- Inflammation of the skin bordering a nail of a finger or toe, usually characterized by infection and pus formation; felon.



Causes

- Cuts, broken skin or hangnails.
- Ingrown nails (this happens most often with ingrown toenails).
- Irritation from water or chemicals.
- Trauma to the nailbed or cuticle area. Trauma can result from accidents, *nail biting* or lack of hygiene during manicures or pedicures.
- Some medications can also cause paronychia. Some of these medications include retinoids, anti-cancer medications, HIV medications
- Typically, *Staphylococcus* and *Streptococcus*

Treatment

- Treatment is primarily through drainage (I&D)
- Smaller paronychia may resolve spontaneously with the application of warm compresses and antibiotic therapy
- Larger paronychia will require drainage due to an increase in collection of bacteria and inflammation, which lessens the success of conservative measures
- Untreated paronychia:
  - May slowly reabsorb, or may spontaneously rupture and drain, but pain typically makes patient seek treatment.
  - Deep extension into the subcutaneous tissue may be followed by sloughing and extensive scarring.
  - (Rare) May lead to systemic infection/sepsis/osteomyelitis.

Equipment

- Universal precaution materials (gown, gloves, protective eyewear)
- Draping towels and gloves (considered a clean procedure in most areas)
- 18-gauge needle or 11 blade scalpel
- Skin prep material (chlorhexidine [Hibiclens] or iodine swabs)
- Dressing (bandaid)
- Local anesthetic/finger block if patient prefers (typically this is a painless procedure as nerve endings are stretched and less sensitive)

Procedure

- Clean nail and surrounding skin with cleaning solution.
- Most paronychia can be drained by simply lifting up the eponychium to drain the pus, rather than making an incision directly into the skin. A skin incision takes longer to heal. Holding the blade or needle parallel to the **nail bed** (NOT at a 90-degree angle), scrape along the edge of the cuticle and lift up the edge of the **eponychium** and allow pus drainage. Fan the blade or tip of the needle in the cavity to encourage more drainage.
- Consider culture & sensitivity testing.
- Cover with Band-Aid.

Procedure Video

- Paronychia video

After Care Instructions

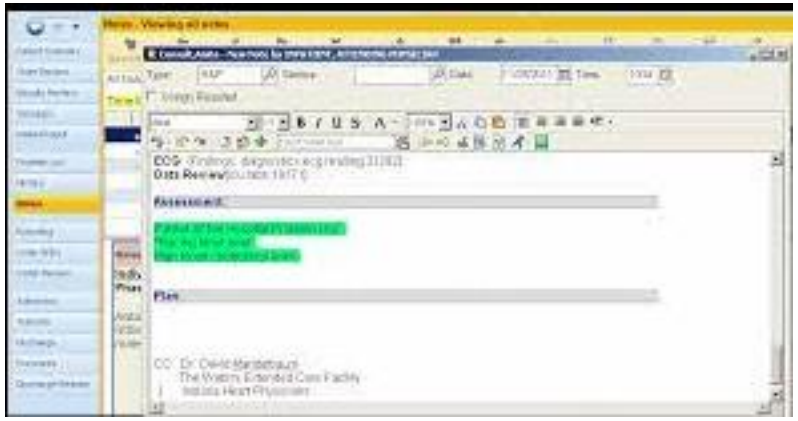
- Warm soaks several times daily for 2-3 days to encourage further drainage.
- May take over-the-counter pain relievers as needed for pain. Typically, once drainage occurs pain relief is immediate.
- Take antibiotics as prescribed. Antibiotics may be used for 5-7 days. A cephalosporin would be a reasonable choice, but **infections are polymicrobial**. Most who have good drainage do not need antibiotics.
- Consider referral to podiatry if recurrent onychocryptosis.
- Review signs/symptoms of infection/reoccurrence.

Complications

- Pain during/after the procedure
- Bleeding
- Reoccurrence of paronychia
- Damage to nailbed
- Osteomyelitis (rare)

Documentation

- After consent obtained and time out procedure performed, skin was cleansed with ***. ***(*document anesthesia if done*). Using an 18 ga needle (*or 11 blade scalpel*) the cuticle line was scraped, and a *** amount of purulent drainage was expressed. Culture swab obtained. A dry sterile dressing was applied. Patient tolerated procedure well.



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- Paronychia (Nail Infection): What Is It, Symptoms, Causes and Treatment. (2021). Retrieved 26 April 2022, from https://my.clevelandclinic.org/health/diseases/15327-nail-infection-paronychia

Questions?

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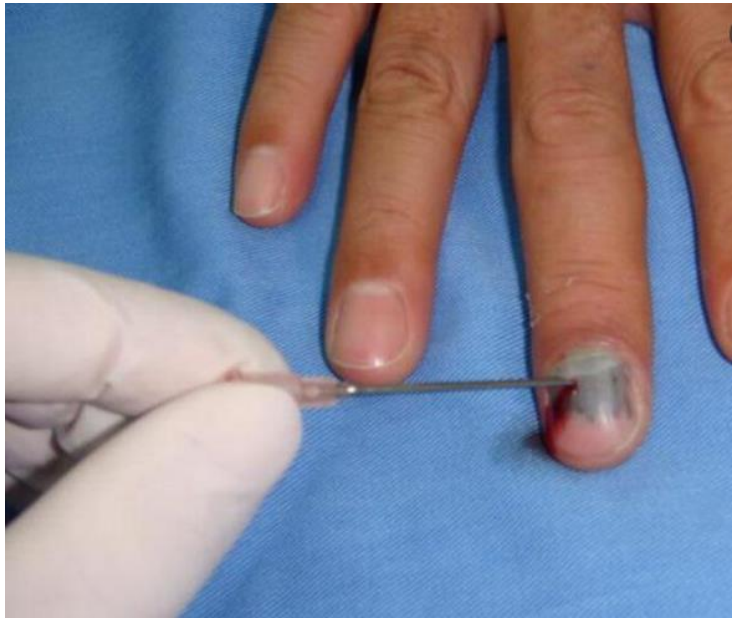
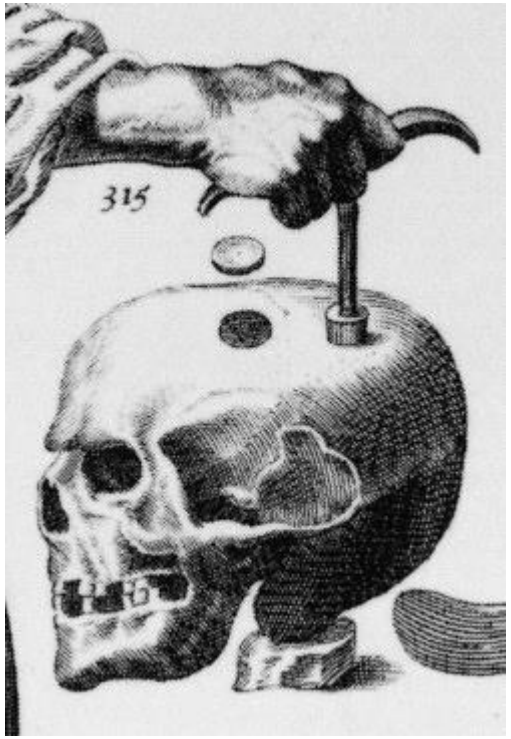
https://www.ncbi.nlm.nih.gov/books/NBK482508/

https://www.uptodate.com/contents/subungual-hematoma

This....Not THAT!





Objectives

- Describe and review pathophysiology of subungual hematoma.
- Describe and review treatment of subungual hematoma.
- Describe and review the fundamentals of subungual hematoma drainage indications, contraindications, trephination equipment and procedure.
- Discuss and review complications of nail trephination.
- Discuss and review aftercare instructions for nail trephination.
- Discuss and review documentation of nail trephination.

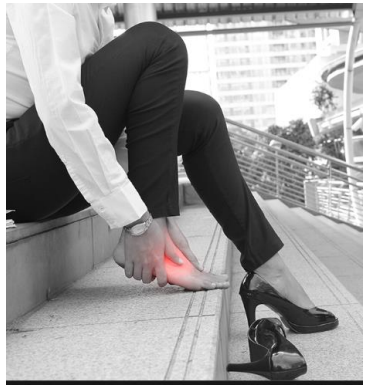
Definitions

- Subungual hematoma: A transient condition where blood and fluid collect underneath the fingernail or toenail.

- Nail trephination: Nail trephination is creating a hole in the fingernail or toenail to release trapped blood from beneath the nail.

Causes

- Traumatic injury (hitting thumb with hammer, stubbing toe). Consider X-ray to rule out fracture.
- Wearing tight-fitting shoes which trap blood in the toes leading to an increased pressure within the blood vessels of the toes.
- Long distance running



Treatment

- Many subungual hematomas can be cared for at home. Subungual hematomas that are relatively painless, small, or have drained spontaneously (eg, under the distal edge of the nail) do not require trephination.
- To reduce swelling, elevate the affected hand or foot and apply ice to the area.
- Over-the-counter pain medications can relieve discomfort and help reduce inflammation.
- Patients often seek treatment due to pain and fear of nail loss.
- Large subungual hematomas require trephination for pain relief and to attempt prevention of nail loss.

Equipment

- Universal precaution materials (gown, gloves, protective eyewear)
- Draping towels and gloves (considered a clean procedure in most areas)
- 18-gauge needle or cautery device (eg, disposable pen)
- Cleansing solution such as chlorhexidine
- Syringes and needles to give local anesthesia if patient prefers (typically performing anesthesia creates more pain than procedure itself)
- Dry dressing/Band-Aid

Procedure

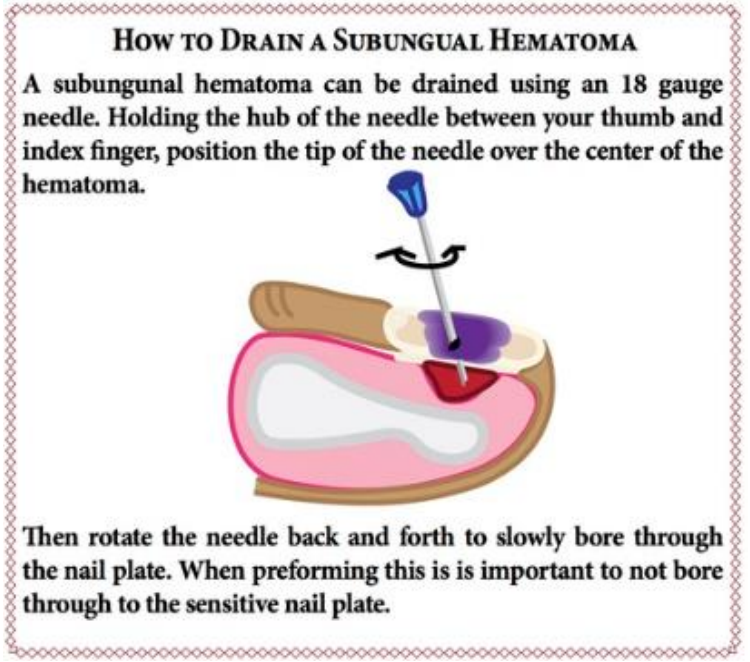
- Clean the nail and digit gently with a wound cleanser such as chlorhexidine.
- Reassure the patient that trephination takes only a few seconds and is almost painless—much less so than a digital block.
- If the patient cannot be reassured, anesthetize the distal finger with a digital block.
- If using cautery, activate heat, place the device over the center of the subungual hematoma, exert mild pressure with control until a “give” is felt and blood comes out; this takes < 1 second.

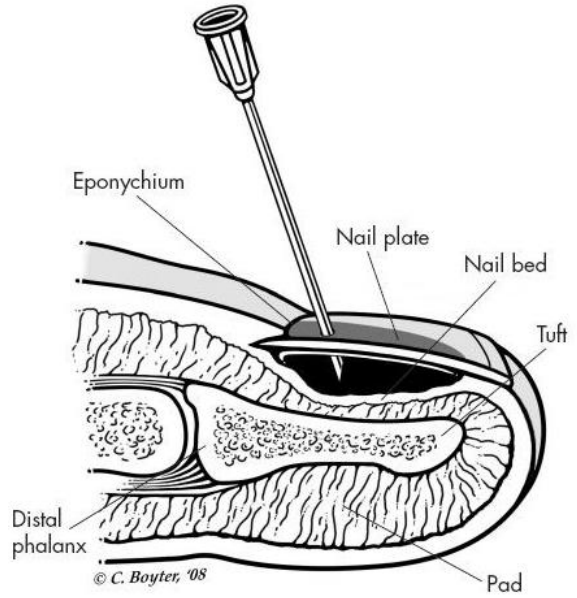
Procedure Video

- Trephination with electrocautery tool

Procedure

- If using a needle, use a rotating motion with moderate pressure to drill carefully through the nail.
- With successful drainage, there is an immediate, marked decrease in pain and visible diminution of the hematoma.
- If pain is not significantly relieved, consider whether another area of the hematoma requires drainage (usually one well-placed hole is sufficient).





Procedure Video

- Nail trephination with needle

After Care Instructions

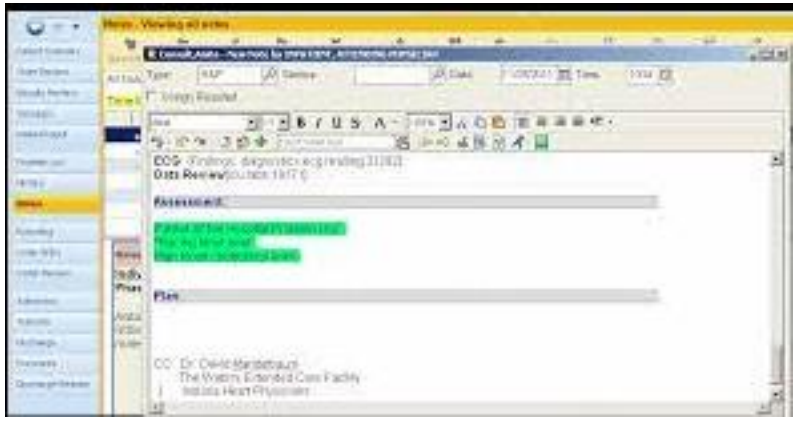
- Dress with sterile gauze/dry dressing. Inform the patient that drainage through the hole may continue for 24 to 36 hours. Advise patient to soak in water/hydrogen peroxide mix to encourage continued drainage.
- Return of pain may indicate a trephination site clot. Soaking can help remove the clot and relieve pain.
- Prophylactic antibiotics are not routinely needed unless a tuft fracture is present.
- If fracture is present, splint appropriately and refer to orthopedics/podiatry.

Complications

- Pain during/after the procedure
- Bleeding
- Reoccurrence of subungual hematoma
- Damage to nailbed
- Loss of nail
- Osteomyelitis (rare)
- Creation of open fracture infection risk
- Consider *fire risk* (do not drill through acrylic nails-highly *flammable*!)

Documentation

- After consent obtained and time out procedure performed, nail and surrounding skin was cleansed with ***. ***(*document anesthesia if done*). Using an 18 ga needle (*or electrocautery tool*) the nail was punctured, and a *** amount of blood was expressed. A dry sterile dressing was applied. Patient tolerated procedure well.



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- Fastle, R., & Bothner, J. (2020). Subungual hematoma. Retrieved 26 April 2022, from https://www.uptodate.com/contents/subungual-hematoma

Questions?

Nursemaid’s Elbow

4/5/2023

Kathy Praisler-Wood

MSN, APRN, FNP-C

Nursemaid’s Elbow

Dimitri Otis / The Image Bank / Getty Images

Objectives

- Describe the causes of nursemaid's elbow in children
- Describe normal elbow anatomy and pathophysiology of nursemaid's elbow
- Recognize the common presentation of nursemaid's elbow
- Perform physical exam of elbow
- Describe diagnostic hallmarks of nursemaid's elbow and differential diagnoses
- Describe treatment of condition and demonstrate reduction of radial head subluxation

Overview

- a common elbow injury seen in young children
- causes a subluxation of one of the bones (the radius) at the elbow joint
- usually occurs in children age 5 or younger
- Aka radial head subluxation

Anatomy

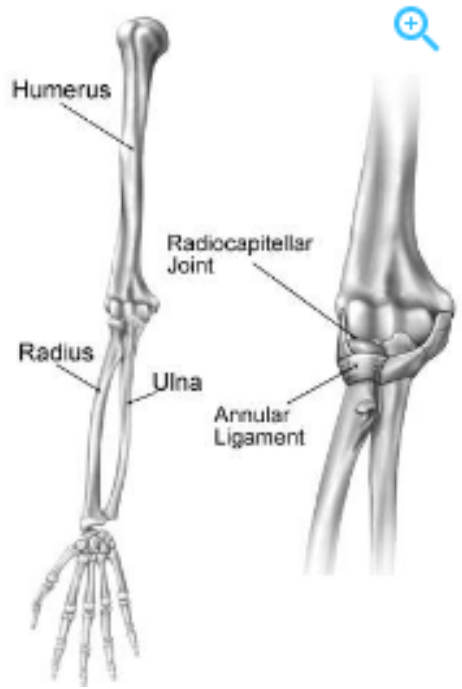
- elbow is made up of the upper arm humerus and the radius and ulna in the lower arm.On the inner and outer sides of the elbow, strong ligaments hold the elbow joint together and work to prevent dislocation.
- There are two joints in the elbow:

  *humeroulnar joint between the ulna and humerus allows for bending of the elbow.

  *radiocapitellar joint, made up of the radius and part of the humerus, allows for rotation of the forearm (supination and pronation)

- The radiocapitellar joint is involved in nursemaid's elbow.

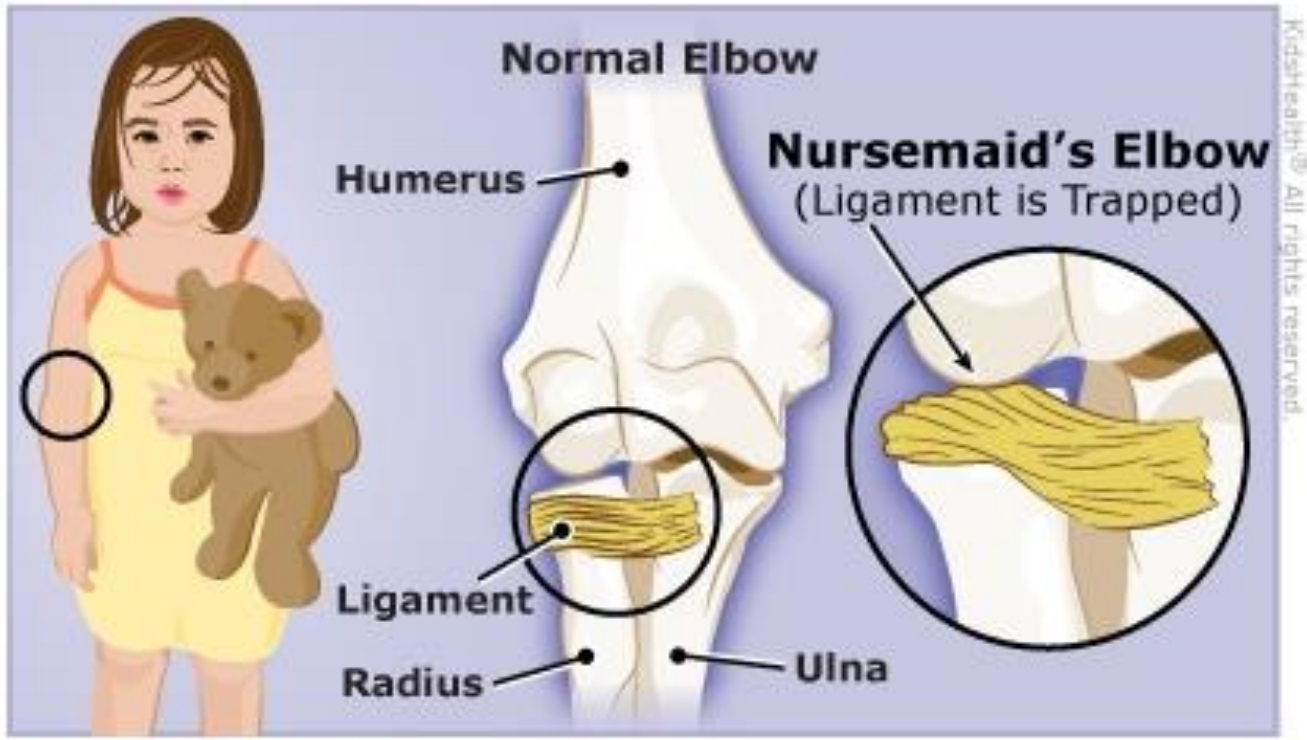
Anatomy



(**Left**) The bones of the elbow and forearm shown with the palm facing forward. (**Right**) The ligaments of the elbow. In young children, the annular ligament may be weak, making it easier for the radius to slip out of place.

Reproduced with permission from J Bernstein, ed: Musculoskeletal Medicine. Rosemont, IL, American Academy of Orthopaedic Surgeons, 2003.

Anatomy


Normal Elbow
Humerus
Nursemaid's Elbow
(Ligament is Trapped)
Ligament
Radius
Ulna
KidsHealth® All rights reserved.

Patient presentation

- Not moving arm
- Guarding arm
- Cries with movement of arm

Physical exam

- pain and tenderness localized to the lateral aspect of the elbow
- Decreased range of motion
- pain with movement

Diagnosis

- Radiographs not required in the setting of the classic presentation of history of traction injury
- child five years or younger
- consistent clinical exam
- when obtained, elbow radiographs are normal
- 25% will show radiocapitellar line slightly lateral to center of capitellum

Diagnosis

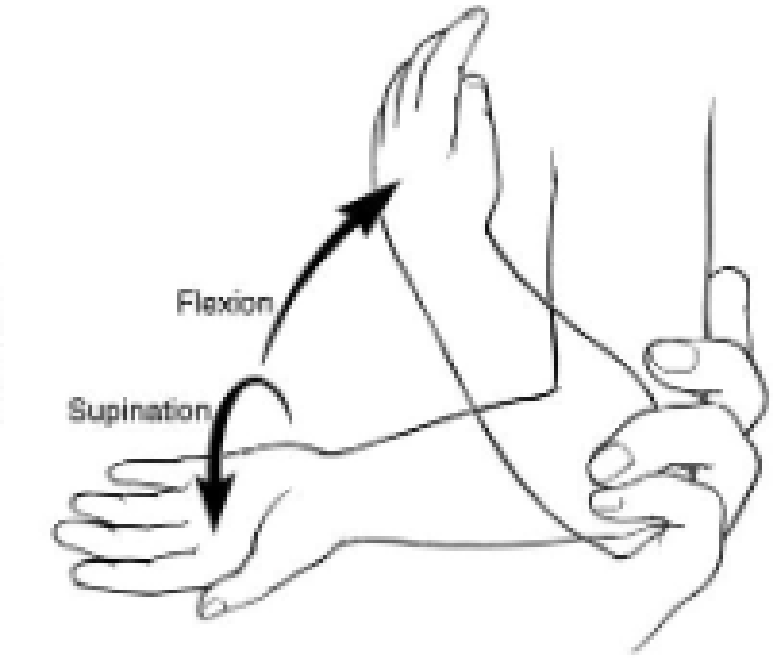
- Ultrasound can helpful for confirming the diagnosis when necessary
- when the mechanism of injury is not evident
- when physical examination is inconclusive
- benefits
  - no radiation to the patient
  - can visualize soft tissues
- findings
- increase echo-negative area between capitellum and radial head
- sensitivity 64.9% and specificity 100%

Diagnosis

- Nursemaid elbow is a diagnosis of exclusion
- Differentials:
- traumatic causes
  - supracondylar fracture, olecranon fracture, radial neck fracture, lateral condyle fracture, radial head dislocation
- contusion
- infection
- septic arthritis

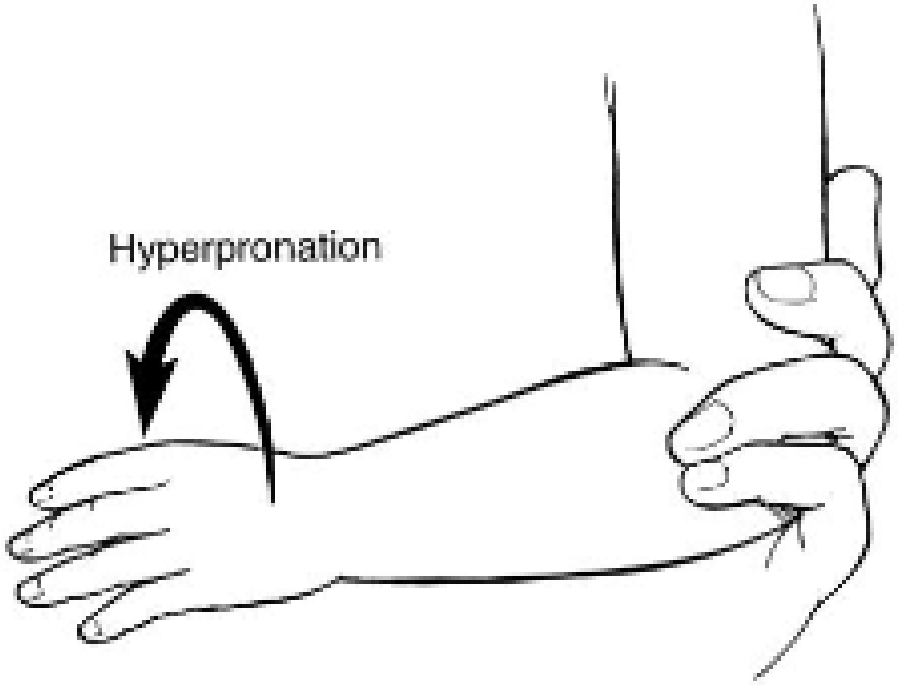
Treatment

- Supination technique
- while holding the arm supinated the elbow is then maximally flexed while applying light traction
- the provider's thumb applies pressure over the radial head and a palpable click is often heard with reduction of the radial head



Treatment

- Pronation technique
- involves hyperpronation of the forearm while in the flexed position



Treatment

- https://youtu.be/U8Q1oS85T0k
- https://youtu.be/OVNKbJVZU5I

Question?

A 6-year-old boy fell off the monkey bars 1 hour ago and has had pain and decreased elbow motion since his fall. His mom gave him tylenol but he refuses to move his arm and cries if anyone touches his arm. His radiograph is shown in Figure A. What is the most appropriate treatment?

(1) Bracing and early range of motion
(2) Application of orthoglass splint and sling
(3) Referral to orthopedics for closed reduction with sedation
(4) Referral to orthopedics for open reduction and internal fixation of fracture
(5) Closed reduction in office, offer sling for comfort, pain meds as needed

5. The radiograph show a dislocation of the radiocapitellar joint. Since the injury is acute (1 hour ago) closed reduction can safely be attempted in the office. A sling can be worn afterwards to limit movement but is not necesssary. The child may be given analgesic medication such as tylenol or ibuprofen, but typically are pain-free once reduction is successful.

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