Common Office Procedures

For Adult and Family Primary Care

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Objectives

- Discuss common procedures in ambulatory care in relation to their causes, incidence of, indications and contraindications for each procedure
- Discuss relevant client instructions
- Discuss legal issues related to performance of these procedures

Legal Issues

- What does your state law say about scope of practice?
- Delegation from physician?

Issues

- Adequate training
- Consistent with policy?
- Reimbursement
- Professional liability policy

Considerations for All Procedures

- Description of Procedure
- Anatomy and Physiology
- Indications / Contraindications
- Precautions
- Assessment
- Patient Preparation
- Alternatives

Local Anesthesia

- Fibers transmitting painful stimuli
  - Narrow
  - Non-myelinated
- Fibers transmitting touch and pressure
  - Thicker
  - Myelinated

Local Anesthesia

- Infiltrates tissues and diffuses across neural sheaths and membranes
- Mechanism of action:
  - Interferes with neural depolarization and transmission of impulses
- 1% lidocaine blocks pain
- 2% lidocaine blocks all sensations

Local Anesthesia

- Pharmacological Properties
  - Onset of action
  - Duration
  - Toxicity
    - All are affected by local vascularity, type and amount of anesthetic, concentration, technique, accuracy of injection, and adjunctive use of epinephrine

Local Anesthesia

- Epinephrine
  - Pros
  - Cons
- Toxicity
  - Cardiovascular
  - CNS effects
  - Syncope

Local Anesthesia

Agent	Concentration	Onset	Duration	Max Dose
Lidocaine	1%	<1 min	0.5-2 hrs	4.5mg/kg (30 cc)
Lidocaine With epi	1%	<1 min	2-6 hrs	7 mg/kg (50cc)
Lidocaine	2%	<1 min	0.5-2 hrs	2-3 mg/kg (15-20 cc)
Mepivicaine Carbocaine	1%	3-5 min	1-3 hrs	5 mg/kg (30 cc)
Bupivicaine Marcaine	0.25%	5 min	3-7 hrs	3 mg/kg (50cc)

Local Anesthesia

- Prevention of Toxic Reactions
  - Avoid injection into a blood vessel
  - Do not exceed recommended dose
  - Gentle handling of patient
  - Patient always supine

Decreasing Pain with Injection

- Warm Water
- Ethyl Chloride
- Tetracaine/Adrenaline
- EMLA Cream or Disk
- Buffering anesthetics (Sodium Bicarbonate)

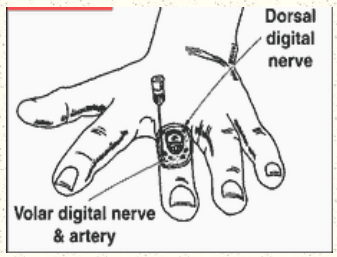
Digital Block

- Anesthetic recommended for lacerations and procedures distal to the level of the mid-proximal phalanx of a finger or toe
- Indications:
  - Nail removal
  - Some Paronychial lesions
  - Lacerations of the digits
  - Foreign body removal

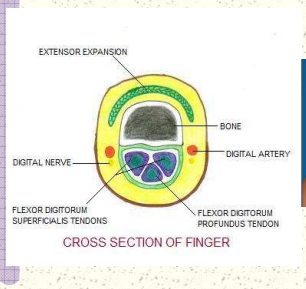
Digital Block

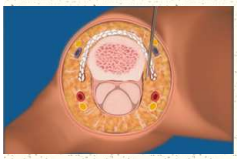
- Anatomy of the digits
  - Four nerves per digit
  - Palmar nerves dominant
  - Nerves immediately adjacent to phalanges

Digital Block



Nerves in finger

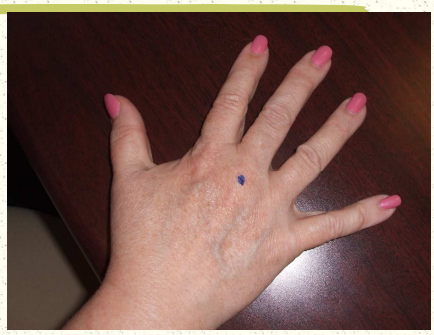




Digital Block Equipment

- Sterile drape and gloves
- Betadine
- 5 or 10 cc syringe with 27 gauge needle
- Local anesthetic
- Sodium bicarbonate

Locate the injection site (step 1)



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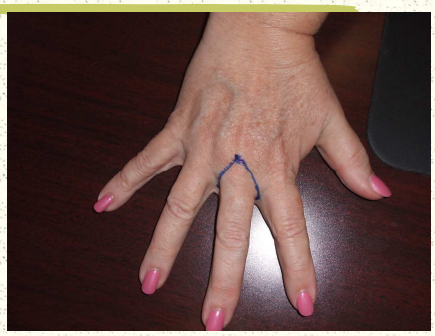
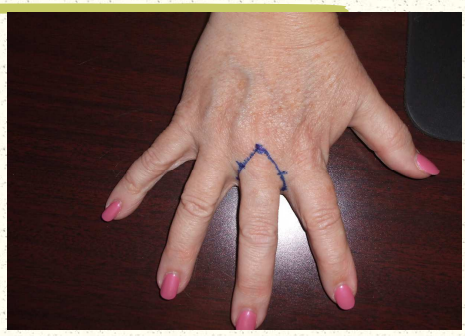


(step 3)



Digital Block Procedure

- Introduce needle into dorsal, lateral aspect of proximal phalanx in web space, just distal to MP joint
- Advance slowly until touch bone
- Aspirate and then inject 0.5 cc
- Back needle out slightly and then pass closely adjacent bone to the volar surface
- Aspirate and inject 1cc
- Repeat procedure on opposite of finger

Digital Block

Digital Block

- Dictated by subsequent procedure
- Red flag: history of allergy to local anesthesia
- CPT code:
  - 01460: anesthesia for lower leg, ankle or foot
  - 01800: anesthesia for hand, wrist, and forearm

Field Block

- Reasons to use:
  - Abscess incision and drainage
  - Foreign body removal
  - Subcutaneous cyst removal/ drainage
  - Suturing
  - Wound debridement

Field Block

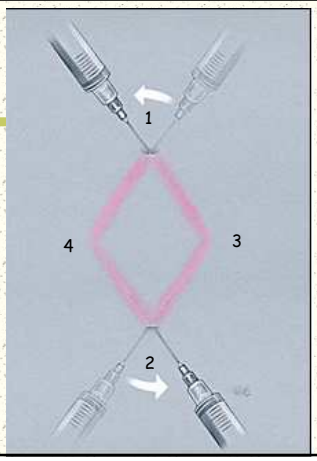
- Reasons not to use:
  - Allergy to anesthetic agent
  - Infection at injection site
  - Poor patient acceptance or cooperation
  - Coagulopathy

Field Block

- Obtain Consent
- Prep area
- Be familiar with underlying anatomy
- Select proper anesthetic for area
- Identify 12 o'clock, 3 o'clock, 6 o'clock and 9 o'clock position around area to be anesthetized
- Inject once at each area changing positions 2 times

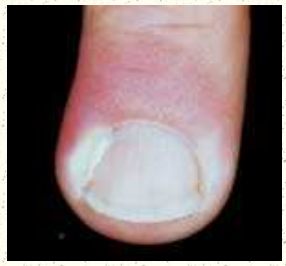
Field Block

Inject 2-3 times at each of the 4 locations

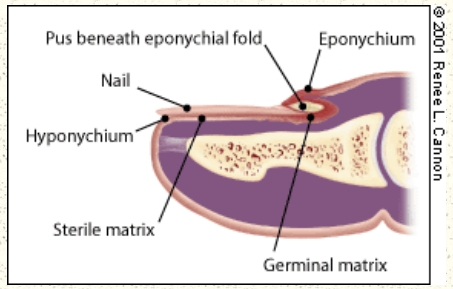


Paronychia

- Inflammation of the tissue surrounding the nail; often the result of an ingrown toenail or hangnail
- Indications
  - Small, mild pain and no pustule:
    - Hot soaks and antibiotic ointment
  - Large, painful, edema or pustule:
    - Drain



Paronychia Anatomy Review



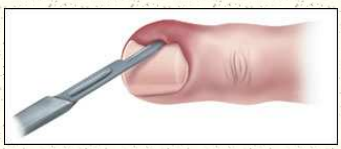
Paronychia

- Equipment
  - Hydrogen peroxide
  - Antiseptic/germicidal solution for pre-soaking
  - Gloves
  - #11 blade or #18 gauge needle
  - 2x2 gauze
  - Antibiotic ointment
  - Scissors
  - Nail File

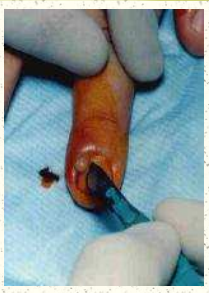
Paronychia

- Consent
- Soak digit
- Insert # 11 blade or needle between eponychium and nail plate
- Gently sweep to separate surfaces and drain pustule
- Re-soak digit
- Apply antibiotic ointment and bandage

Incising a paronychia



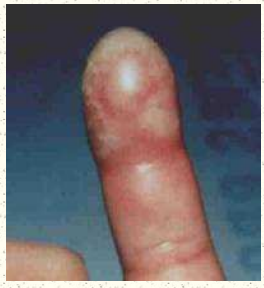
Paronychia Procedure



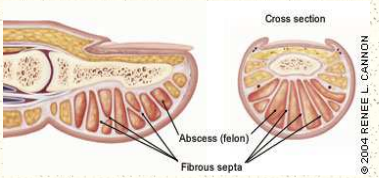
Paronychia

- Follow-up care
  - Soak digit
  - Re-apply ointment and bandage
- Red flags:
  - Pain, swelling, or erythema concentrated on the palmar surface (a felon, not a paronychia)
- CPT code: I& D of an abscess: 10060

Felon

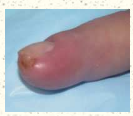


Felon



Felon

Felon of the fingertip. The patient presented with three days of increased swelling, redness, and severe pain of the fingertip.



REFER to a physician, preferably a surgeon!

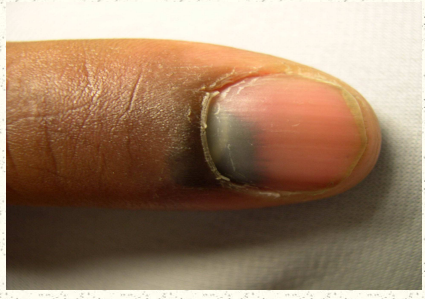
Subungual Hematoma

- Accumulation of blood between the nail plate and the nailbed
- Indications: Visible, painful hematoma beneath the involved nail (less than 50% of the nailbed)
- Contraindications: open injury to another part of the finger, extensive soft tissue infection, crushed or fractured nail or phalanx

Subungual Hematoma Anatomy overview

- Nails are epidermal cells converted to hard plates of keratin. The highly vascular nailbed lies beneath the plate. The cuticle or eponychium, is the layer of skin covering the nail root.

Subungual Hematoma



Subungual Hematoma Equipment

- Lighter, metal paper clip, and forceps or clamp
- OR cautery unit with a needle or pointed electrode
- Scalpel #11 or needle 18 ga
- Betadine
- Alcohol wipe
- Antibiotic ointment
- Bandage,gauze, splint (if necessary)
- gloves

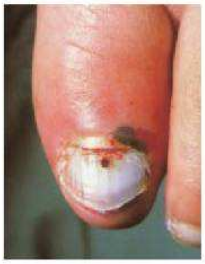
Subungual Hematoma Drainage Procedure

- Consent
- Soak in antiseptic solution
- Clean nail with alcohol
- Bore hole in nail
- Dressing, may splint

Use of Cautery

Flash of blood with pressure release

Release the pressure



Subungual Hematoma

Follow-Up Care / Patient Education

- Elevate finger
- Cool compresses and single bandage during the first 12 hours
- Soak 2-3 times a day
- Patient to call for persistent pain, purulent drainage, change in sensation in finger, fever, blood returns or inflammation

Subungual Hematoma

- Red Flags:
  - Crushes nail
  - Hematoma > 50% of nail bed
  - Subungual melanoma
  - Fractured phalanx
- CPT code:
  - 11740 evacuation of a subungual hematoma

Foreign Body – Nail Bed

- Common problem that may cause pain or infection
- Many foreign bodies will work themselves out without intervention
- Indication for removal:
  - Large, deep, or barbed foreign body that the patient is unable to remove
  - Surrounding infection

Foreign Body – Nail Bed Equipment

- Gloves
- Nail clippers
- Straight hemostat
- #15 scalpel
- 27 g needle
- bacitracin

Foreign Body – Nail Bed Procedure

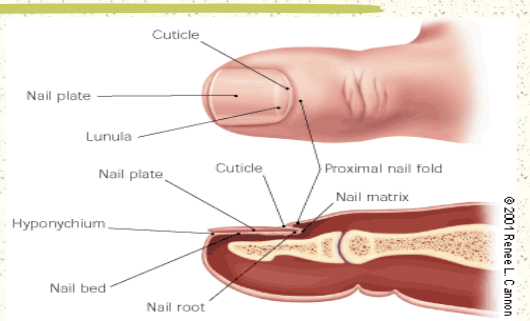
- Avoid soaking!
- May shave nail to access
- May remove by trimming wedge in nail plate
- Digital block is needed if above procedure is unsuccessful

Foreign Body – Nail Bed Procedure (continued)

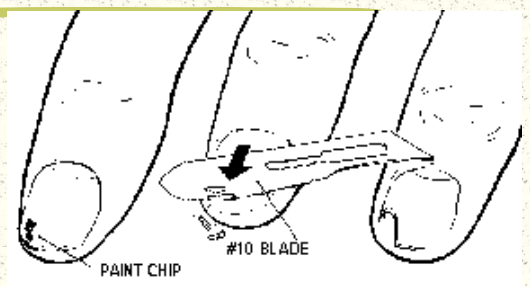
- Cut deeper wedge into nail
- Create barb on 27g needle by bending tip
- Insert adjacent and parallel to proximal end
- Twist and rake barb

DON'T FORGET TETANUS!

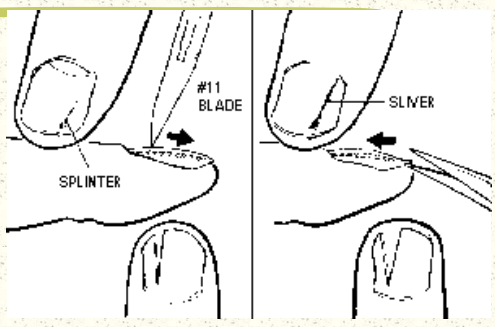
Foreign Body – Nail Bed Anatomy



Remove overlaying nail by shaving off



Carve through the nail down to the perimeter in a wedge shape with scalpel or scissor



Foreign Body – Nail Bed

- After removal, soak in antiseptic solution
- Apply Bacitracin and bandaid

Foreign Body – Nail Bed Follow-up care

- Soaks may be needed depending on the procedure
- Bacitracin bandaids
- RED flag: foreign body not visible

Documentation

- H&P; careful attention to neuromuscular and motor function, X-ray
- Nature of All wounds that were explored
- Type of anesthesia (NDC#)
- Type of repair/ dressing
- If suture, # and size and type of suture used.
- Care Instructions
- Foreign body
- Tetanus/ Antibiotics

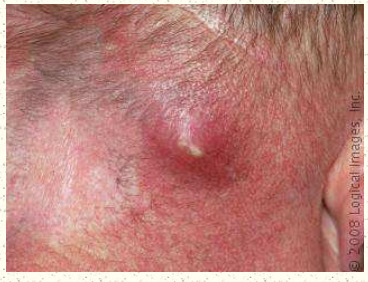
Incision and Drainage of an Abscess

- An abscess is a collection of fluid in the cutaneous tissue which results in a painful, erythematous, fluctuant mass.
- Reasons to perform I&D:

  to relieve associated pain

  to minimize damage to surrounding tissue

Abscess: Anatomy review



I & D of abscess

- RED flags prior to procedure
  - Tense, non-fluctuant
  - Pulsatile mass

Assessment

- History of Present abnormality
- Pertinent Past medical History
- Allergies
- Physical Exam

Supplies:

- Anesthesia
- Antiseptic Solution
- 2 X 2 or 4 X 4
- #11 surgical blade
- Curved hemostat
- Forceps
- Iodoform gauze
- Fenestrated Drape
- Gown
- Gloves
- Eye shield
- Culture tube
- Scissors
- Cotton tip applicator

Procedure

- Consent form
- Cleanse the abscess
- Sterile field
- Field block—do not inject the abscess!
- Incise deeply and long enough to allow drainage and prevent closure
- Irrigate
- Pack with iodoform gauze
- Dress

Incision of Abscess

Explore Laculation

Documentation

- Size
- Color
- Fluctuant
- Fever
- Proximal adenopathy
- WBC (if systemic infection suspected)

I & D of abscess

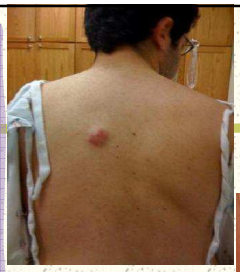
- Follow-up care / Education
  - Cleanse wound
  - When to call/ return visit
- Red flags
  - Facial, palmar, and peri-urethral abscess
  - Diabetes
  - Immunosuppression
  - Deep foreign body

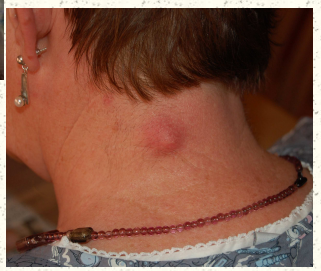
Cyst Removal

- Sebaceous Cyst is sometimes classified as as an Epidermal Inclusion Cyst, both are small, mobile, superficial cyst that contain a thick, white- yellowish substance called keratin
- Common, non-cancerous cysts of the skin.
- Frequently found on face, ears, neck and torso (chest and back)
- Usually painless, they rarely cause problems or need treatment.

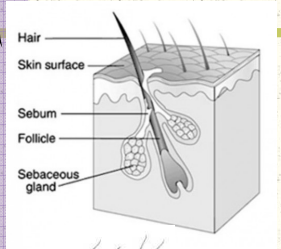
When do Cysts need removal?

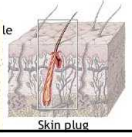
- Reasons to remove a Cyst include:
  - Inflamed
  - Repetitive Infection
  - Cyst ruptures
  - Bothersome
  - Large and unsightly
    - ¼ to 2 inches





Anatomy





- Epidermoid glands arise from the cells that make up the outer layers of skin
- Epidermis is a thin protective lawyer of skin that continuously sheds
- Instead of exfoliating, these cells move deeper into skin and multiply
- Frequently at hair follicle or larger oil gland
- Epidermal cells form a wall and secrete protein keratin in the interior

Causes and Risks

- Causes:
  - Damage to hair follicle
  - Ruptured sebacceous gland
  - Developmental defect
  - Heredity
- Risks:
  - Puberty
  - Male
  - Acne
  - Excessive sun exposure
  - Skin injuries

Assessment

- History
- Any prior treatment
- Review S&S of infection
- PMH: especially wound healing, risk of infection and bleeding
- Allergies and Meds
- PE: size, mobility, color, inflammation

Patient Preparation

- Written Consent
- Review risks and benefits
- Alternatives:
  - No treatment if not infected
  - Excision even if not infected
- Position patient comfortably so that they can hold a position for prolonged time and cyst is easily accessed

Supplies

- Anesthesia
- Antiseptic solution
- Sterile 2X2 or 4X4
- #11 scapel
- Curved hemostat
- Smooth forceps
- Sterile fenestrated drape
- Sterile iodoform gauze
- Culture swab
- Scissors
- Sterile cotton tipped swabs
- Dressing supplies: gauze, Ab oint, tape
- Sterile gloves
- Eye and face protection
- gown

Procedure:

- Cleanse Area with antiseptic solution
- Provide Local Anesthesia and drape
- Make elliptical incision around cyst but not into cyst
- Carefully free the cyst from the connecting tissue while maintaining its intact membrane
- Alternative: drain content then remove membrane wall
- * if membrane not intact must assure all pieces of membrane removed.
- * if solid or immobile may send to pathology

http://www.youtube.com/watch?v=HBJ5t3CvOtY

Post-procedure:

- If cyst was removed whole may want to suture closed
- If the membrane was not removed as a whole and it was infected pack and dress the wound
- May be some oozing from site and tenderness
- If wound was packed and dressed keep dry
- Review S&S of Infection
- If sutured remove in 7-10 days
- Warn patient cyst may reoccur

Documentation

- Location, size, intact or not
- Anesthesia
- Closure/ dressed
- Disposition of cyst
- Complications
- Instructions
- Follow-up

Complications

- Infection
- Scarring and Keloid formation

Follow up

- Depends on:
  - If area was packed
  - If it was sutured
  - Develop infection
- CPT: depends on size and type of lesion
  - 10060: (incision and drainage of abcess)
  - 10061: complicated or multiple
  - 11420-11446 : Excision of benign lesion

CRYOSURGERY

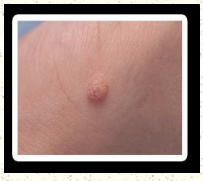
Definition: The process of applying extreme cold to a lesion for the purpose of destruction

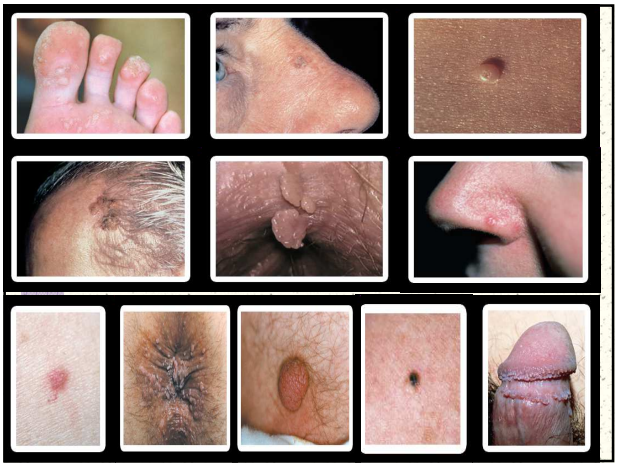
Indications:

- **Seborrheic Keratoses**
- **Actinic Keratoses**
- **Skin tags**
- **Verruca Vulgaris**

CRYOSURGERY

- Indications
  - Plantar Warts
  - Condyloma Acuminatum
  - Molluscum Contagiosum
- Advantages
  - Minimal discomfort
  - Minimal scarring
  - No sutures needed





CRYOSURGERY

- Advantages
  - Allows for complete destruction of certain tissues
  - Minimal trauma to healthy tissue
  - Readily available
  - Excellent cosmetic effect with no scar
- Disadvantages
  - May not be effective for all lesions particularly warts
  - Some individuals report moderate pain during the procedure

CRYOSURGERY

- Equipment
  - Betadine
  - 4 X4 gauze
  - Freeze kit or Nitrous Oxide Cryosurgery unit
  - Cotton Applications
  - Vaseline petroleum jelly
  - Dressing

CRYOSURGERY

- Procedure
  - Position the patient for provider comfort
  - Cleanse lesion with betadine
  - Cover lesion with a water soaked dressing for 5-10 minutes
  - Use a cotton applicator to surround the lesion with vaseline petroleum jelly
  - Choose the appropriate wand for the lesion
  - Freeze the lesion for the appropriate amount of time

CRYOSURGERY

- Time Frame
  - Seborrheic Keratoses 30 seconds
  - Actinic Keratoses 90 seconds
  - Skin tags 60 – 90 seconds
  - Verruca Vulgaris 60 – 90 seconds
  - Plantar warts 30 – 40 seconds
  - Condyloma Acuminatum 45 seconds
  - Molluscum Contagiosum 30 seconds

CRYOSURGERY

- Time Frame
  - Another method is to apply the freeze until a frost ring appears approximately 1-2 mm around the lesion

CRYOSURGERY

- Procedure
  - Apply additional pressure for deeper tissue penetration
  - Cover with a dressing
- Follow-up
  - Monitor for redness, discharge, fever, pain, streaking
  - Recheck lesion in 1 week

CRYOSURGERY

- Red Flags
  - Malignant lesions
  - Facial lesions
  - Infected lesions
- CPT Codes
  - 17000: Destruction, any method all benign
  - 17110: Destruction flat warts or Mulluscum contagiosum

Specific Billing Information and Reimbursement

- **Acrochordon (Skin tags)** (CPT 11200, 11201) ~ **$18-$77**
- **Actinic keratosis (Facial and non-facial)** (CPT 17000, 17003, 17004) ~ **$74-$162**
- **Common, Flat, or Plantar warts, Molluscum, Lentigo, and Seborrheic keratosis** (CPT 17110, 17111) ~ **$101-$120**
- **Condyloma (Genital warts)** (CPT 46916, 46924, 54056, 54065, 56501, 56515) ~ **$125-$465**

Punch Biopsy

Description:

Full thickness biopsy of lesions less than 5 mm in diameter

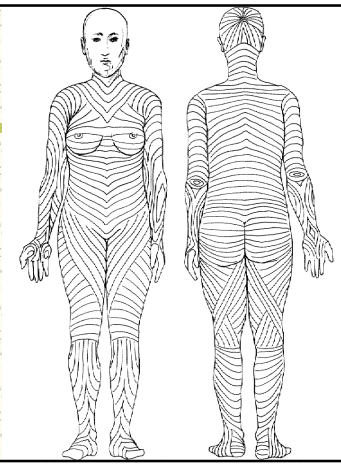
Biopsy of a larger lesion for diagnostic reasons

Punch Biopsy

- Indications:
  - Remove a skin lesion that is suspicious, causing discomfort or a concern
  - Obtain specimen for pathologic purposes
- Contraindications
  - Infection at site

Punch Biopsy

- Length of time lesion has been present and is it changing
- Previous or recent sun exposure
- Past Medical History
- Allergies/ current meds
- Description of lesion
- Determine direction of the skin tension lines



Punch Biopsy

- Patient Preparation
  - Informed written consent
  - Opportunity for questions
  - Possibility of scar
  - Lie patient down
- Inform of Alternatives
  - No Biopsy
  - Excision Biopsy
  - Shave Biopsy
  - Referral

Punch Biopsy

- Precautions:
  - Not to be used on eyelids, lips or penis
  - Allergy to anesthetic agents, (alternative agents may need to be used)
  - Nerve injury from going too far (use care on face, neck or distal extremities

Punch Biopsy: Equipment

- Anesthesia supplies
- Antiseptic solution
- *Suture tray
- Sterile fenestrated drape & sterile tray
- Biopsy punch of appropriate size
- Specimen container with formalin
- Dressing supplies
- Sterile Gloves
- Eye and face protection
- Protective gown

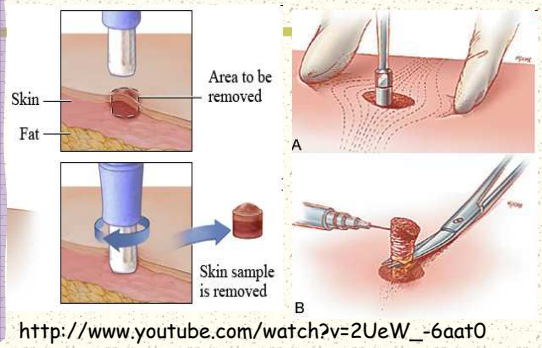
Punch Biopsy: Procedure

- Provide Anesthesia
- Cleanse area using antiseptic solution
- Place fenestrated drape over area
- Apply tension with thumb and index finger of non dominant hand perpendicular to skin tension lines
- Press punch over the lesion and rotate in one direction cutting through skin to subcutaneous tissue

Punch Biopsy: Procedure
(continue)

- Remove the punch instrument, lift the tissue with forceps, cute with iris scissors
- Place specimen in container with formalin
- Apply pressure
- Close elliptical incision
- Apply antibiotic ointment and dressing

Punch Biopsy



http://www.youtube.com/watch?v=2UeW_-6aat0

Punch Biopsy: Complications

- Bleeding
- Infection
- Scaring and keloid formation

Punch Biopsy: Follow-up

- 1 week suture removal
- Educate S&S of infection
- Check of healing
- Discuss pathology report and further treatment if necessary
- Documentation

Punch Biopsy

- Melanoma.
- Other Skin Malignancy. Basal cell carcinoma and squamous cell carcinoma
- Benign Growths.
- Inflammatory Lesions.
- Chronic Skin Disorder

Punch Biopsy: CPT Billing

- Specific Codes for the body site:
  - 21550: Biopsy of tissue of neck and thorax
  - 21920: Biopsy of tissue of back and flank
  - 23065: Biopsy of tissue of shoulder, forearm, wrist superficial
  - 24065: Biopsy of tissue of upper arm and elbow
  - 27040: Biopsy of tissue of pelvis and hip
  - 27323: Biopsy of tissue of thigh and knee
  - 27613: Biopsy of tissue of leg and ankle

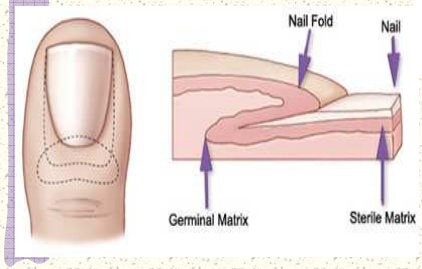
Ingrown Toenail

- Growth of a nail edge into soft tissue, causing inflammation, pain, and sometimes infection
- Very common
- May cause significant pain and disability
- Causes: ill-fitting footwear or improperly cut toenails
- Spur or splinter of nail grows into sulcus triggering inflammation and then infection

Ingrown Toenail Removal

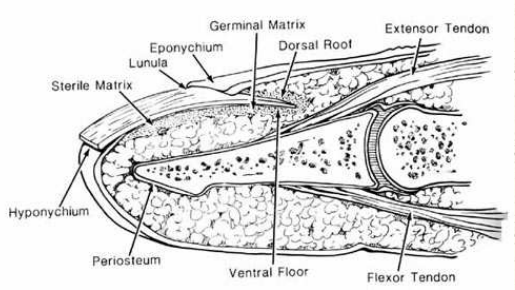
- Indications:
  - Pain
  - Edema
  - Discharge
  - Granulation tissue
- Contraindications
  - Allergy
  - Bleeding diathesis

Ingrown Toenail Anatomy

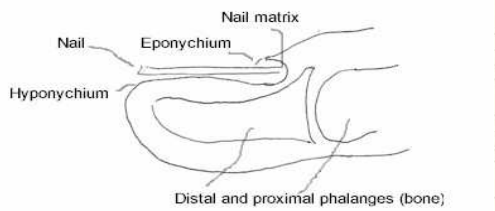


Ingrown Toenail

Nail Anatomy



Cut away view of great toe



Cut-away view of the great toe, lateral view

Ingrown Toenail Removal Equipment

- Hydrogen peroxide
- Gloves
- Local anesthetic
- Betadine
- Nail cutter/splitter
- Straight hemotstat
- 5cc syringe with 27 g needle
- Phenol or silver nitrate,cautery
- Xeroform
- Gauze 2x2

Ingrown Toenail Procedure

- Soak affected toe
- Clean with betadine
- Administer digital nerve block
- Use blade to free eponychium from nail plate
- Split down length of lateral 1/3 of toenail
- Free nail plate from nail bed
- Grasp lateral 1/3 portion with straight clamp
- Pull distally and rotate to affected side simultaneously

Ingrown Toenail Procedure (continued)

- Clean matrix, eponychium, and lateral nail fold
- Apply phenol or silver nitrate
- Apply xeroform and bulky dressing

Ingrown Toenail Follow-up care

- Educate about footwear and trimming
- Elevate and rest foot
- Remove bulky dressing in 3-5 days
- Apply bacitracin and bandaid for 7 days
- NSAIDS prn for several days
- Oral antibiotics are usually unnecessary
- Instruct on S&S of Infection
- Follow up appointment 1-2 weeks

Ingrown Toenail

- Red flags:
  - History of allergy to local anesthetic
  - Bleeding disorders
- CPT code
  - 11730

References

- Edmunds, Marilyn and Mayhew, Maren. Procedures for Primary Care Practitioners.Mosby 2002. ISBN-10: 0323016197 | ISBN-13: 978-032301619
- Zuber, Thomas J. (2012) Skin Biopsy Techniques. When and How to Perform Punch Biopsy. Consultant. June. Vol 52 #6 p462-465.
- Zuber, Thomas J. (2012) Skin Biopsy Techniques. When and How to Perform Shave and Excisional Biopsy. Consultant. July p 522-526
- You Tube Complete Cyst Removal. http://www.youtube.com/watch?v=HBJ5t3CvOtY

Thank you for your attention!

Any Questions ???