

# MINOR SURGERY PURULENT INFECTIONS

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# Surgery in the Physician's Office

Procedures that can be done safely in the office or clinic without general anesthesia

Minor surgery involves the use of a local anesthetic in the form of an injection or a cream applied to the skin

*Minor surgery is performed to diagnose an illness or repair an injury.*

# AGENDA

- ▣ HISTORY
- ▣ EXAMINATION
- ▣ WHAT TO REFER
- ▣ CONSENT
- ▣ LOCAL ANESTHETICS
- ▣ INSTRUMENT AND DRESSING
- ▣ COMPLICATIONS AND MANAGEMENT

# HISTORY OF LESION

- ▣ NUMBER
- ▣ SITE
- ▣ ENLARGEMENT/CHANGE
- ▣ BLOOD/DISCHARGE
- ▣ ODOUR
- ▣ COLOUR
- ▣ ITCH
- ▣ PAIN/DISCOMFORT
- ▣ PREVIOUS LA EXCISION
- ▣ OCCUPATION
- ▣ OUTDOORS/LIVED ABROAD
- ▣ RADIATION

# DRUGS AND ALLERGIES

- ▣ IMMUNOSUPPRESSION
- ▣ BLEEDING
  - WARFARIN
  - XARELTO
  - CLOPIDOGREL
  - DIPYRIDAMOLE
  - ASPIRIN

# PMH AND FH

- ▣ DIABETES
- ▣ PREVIOUS SCARS
- ▣ FH SCARRING
- ▣ FH OF LESIONS

# EXAMINATION

- ▣ SORENESS
- ▣ SITE
- ▣ SIZE
- ▣ SURFACE
- ▣ SYMMETRY
- ▣ SKIN/SUBCUTANEOUS
- ▣ SURVEY

# ASSESSMENT

- ▣ DIAGNOSIS
- ▣ PROCEED
- ▣ REFER



# WHAT TO REFER

- ▣ SITE
- ▣ PETIENT
- ▣ LESION
- ▣ OPERATOR/SETUP

# CONSENT

- ▣ INFORMATION
- ▣ VERBAL
- ▣ WRITTEN

# CONSENT

- ▣ INFECTION
- ▣ BLEEDING
- ▣ DEHISCENCE
- ▣ BAD SCARRING
- ▣ RECURRENCE
- ▣ RE-EXCISION

# Instruments Used in Minor Surgery

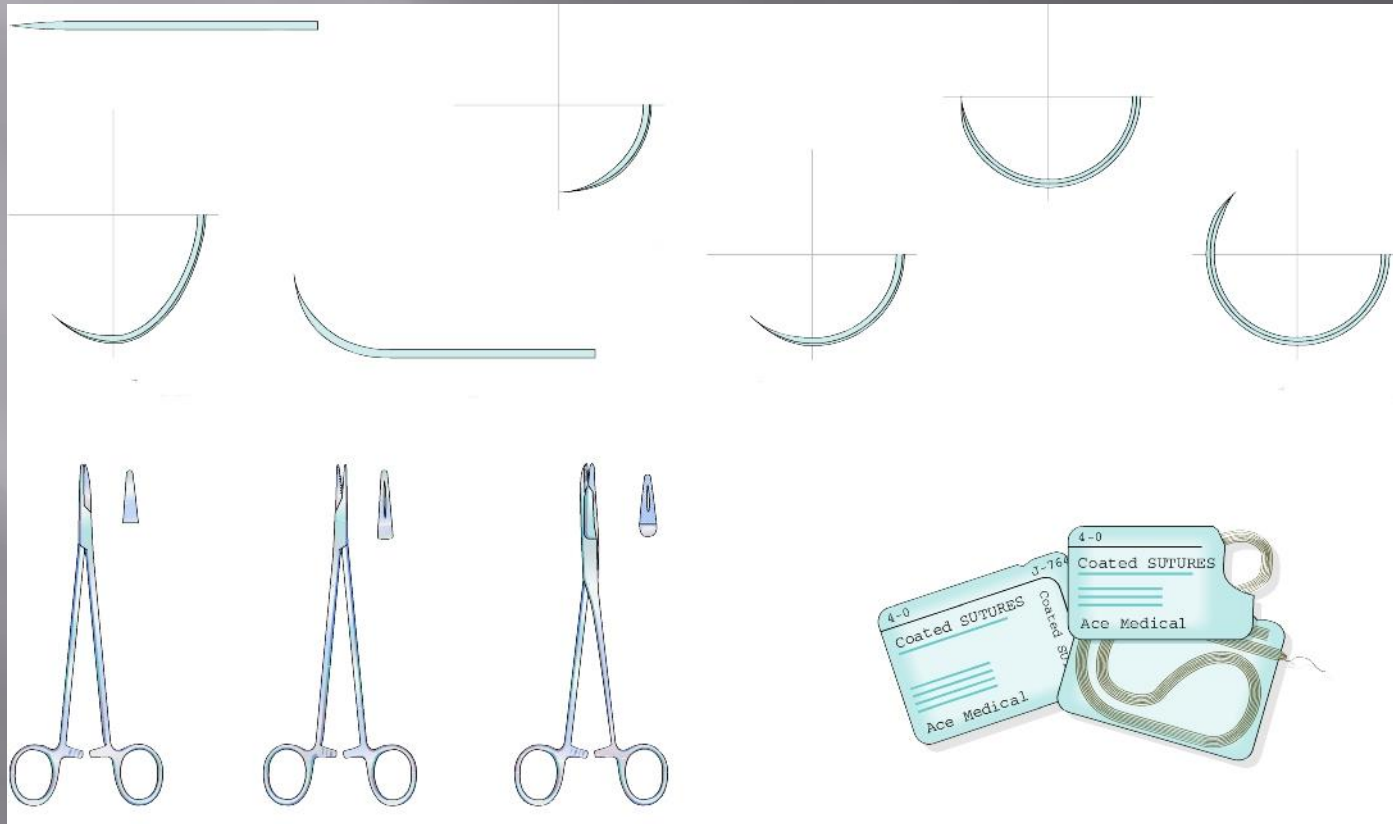
1. Cutting and dissecting – scissors, scalpels, curettes
1. Grasping and clamping – forceps, hemostats, clamps
2. Retracting, dilating, and probing – retractors, dilators, probes
3. Suturing – needle holders, needles, packaged sutures

# Instruments Used in Minor Surgery

## Cutting and Dissecting Instruments

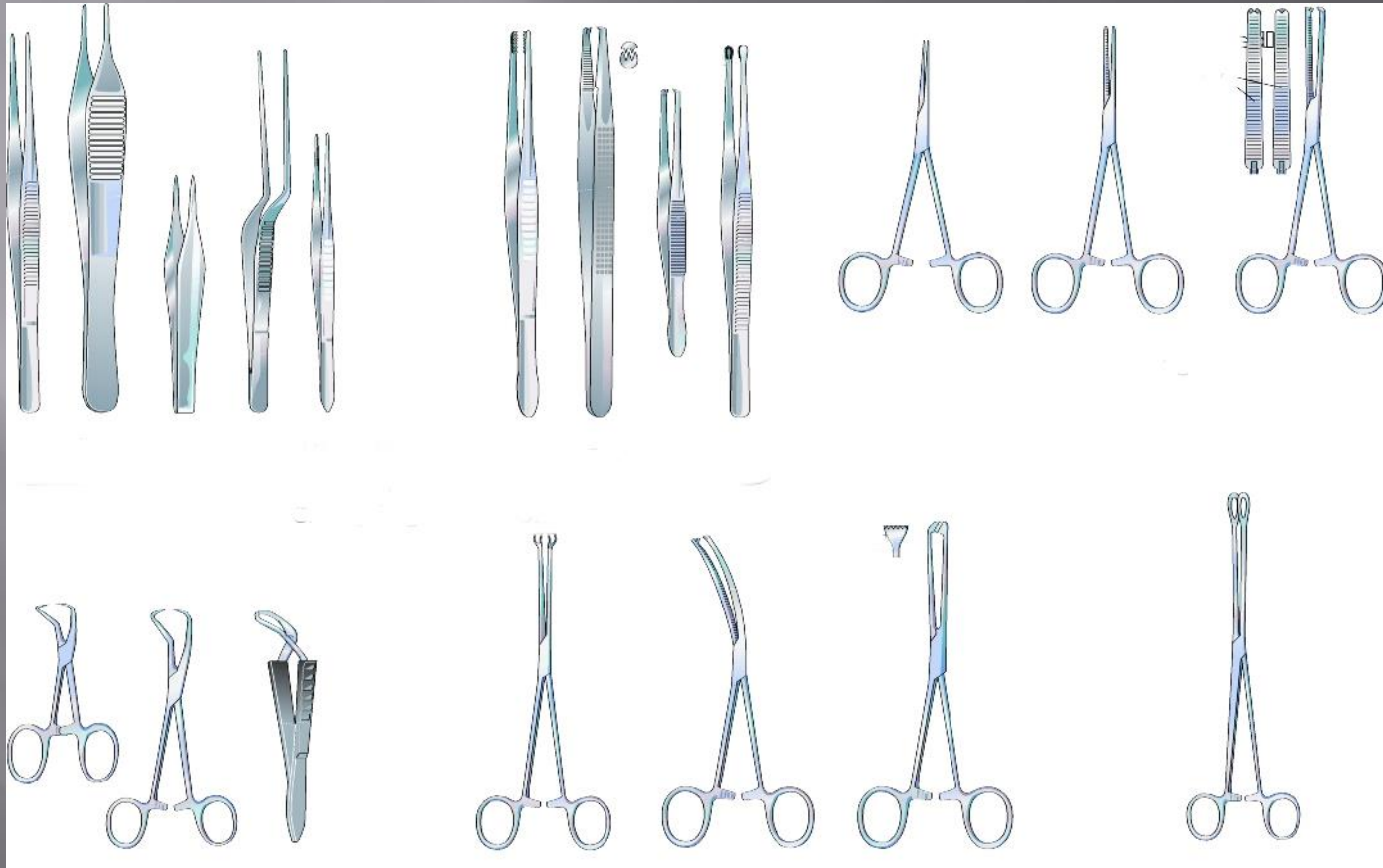


# Instruments Used in Minor Surgery Suturing Instruments



# Instruments Used in Minor Surgery

## Grasping and Clamping Instruments







# Minor Surgery Kit

Medical-Tools.com



1 Olsen-Hager  
Needle Holder 14cm

1 Mayo Scissors  
15cm TC

Kelly Forceps 14cm  
Straight

Kelly Forceps 14cm  
Curved



Adson Forceps  
12cm

Adson Forceps  
1:2 12cm

Mosquito Forceps  
12.5cm Straight

Mosquito Forceps  
12.5cm Curved



Iris Scissors  
11.5cm

Spencer Scissors  
11cm

Scalpal Handle  
#3

Scalpal Handle  
#4

Forceps  
16cm

# Local anasthetics

- ▣ 1. Lignokaine 3 mg/kg (7 mg/kg with adrenaline)
- ▣ 2. Bupivacaine 2 mg/kg

# ADRENALINE

▣ DECREASED BLEEDING  
TOXICITY

INCREASED DURATION OF ANESTHESIA

# TOXICITY FACTORS

- ▣ DOSE
- ▣ SITE
- ▣ RATE OF INJECTION

# complications

- ▣ 4 mg/ml - lightheadness, circumoral and tongue numbness
- ▣ 6 mg/ml - visual disturbances
- ▣ 8 mg/ml - muscular twitching
- ▣ 10 mg/ml - convulsions
- ▣ 12 mg/ml - unconsciousness

- ▣ Bandaging the wound

A clean strip of gauze or elastic material

Holds the dressing in place

May also improve circulation

Provides support or reduces tension on the wound

Prevents the wound from reopening

Prevents movement of the area of the body.

A dressing is a sterile material used to cover the incision, whereas a bandage is a clean strip of gauze or elastic material used to hold the dressing in place.

You may be asked to change the dressing or remove the wound closures.

Suture or staple removal takes place 5 to 10 days after minor surgery.

Suture or staples are ready to be removed when a clean, unbroken suture line is observed.

No scabs, no seeping, and no visible opening should be present.



# Wound Healing

- ▣ **Initial phase** – lag phase- white cells and blood components seal the wound, clot the blood, and remove bacteria and debris
- ▣ **Proliferation phase** – new tissue forms
- ▣ **Maturation phase** – involves the formation of scar tissue



# COMPLICATIONS

- ▣ INFECTION
- ▣ BLEEDING
- ▣ DEHISCENCE
- ▣ RECURRENCE
- ▣ FURTHER OPERATION
- ▣ SCAR

HYPERTROPHIC/KELOID  
STRETCH

# COMPLICATIONS

- ▣ INFECTION:

S.AUREUS

- ▣ ANTIBIOTICS:

FLUCLOXACILLIN/ERYTHROMYCIN

AUGMENTIN

# BLEEDING

- ▣ PRESSURE

# DEHISCENCE

- ▣ ACUTE
- ▣ CHRONIC



# COMPLICATIONS

- ▣ IMMEDIATE DEHISCENCE:
  - RESUTURE
  - RETAPE
- ▣ DELAYED DEHISCENCE
  - DRESSINGS
  - REASSURANCE
  - SCAR REVISION (6-12 MONTHS)

# HYPERTROPHIC SCAR



# HYPERTROPHIC SCAR

## ▣ AVIODANCE

- SITE
- NO TENSION
- ORIENTATION
- SUTURE
- TAPE

## ▣ TREATMENT

- TAPE
- MASSAGE
- SILICONE
- STEROIDS



# KELOID





# Skin and Soft tissue infections

- ▣ Furuncle
- ▣ Hidradenitis suppurativa
- ▣ Cellulitis
- ▣ Abscess
- ▣ Paronychia

A furuncle (or "boil") is an infection of the hair follicle in which purulent material extends through the dermis into the subcutaneous tissue, where a small abscess forms

# Furuncle



**A carbuncle is a coalescence of several inflamed follicles into a single inflammatory mass with purulent drainage from multiple follicles**









An active boil or carbuncle is contagious: the infection can spread to other parts of the person's body or to other people through skin-to-skin contact or the sharing of personal items.

Older age, obesity, poor hygiene, and poor overall health are associated with carbuncles. Other risk factors for carbuncles include:

Chronic skin conditions, which damage the skin's protective barrier

Diabetes

Kidney disease

Liver disease

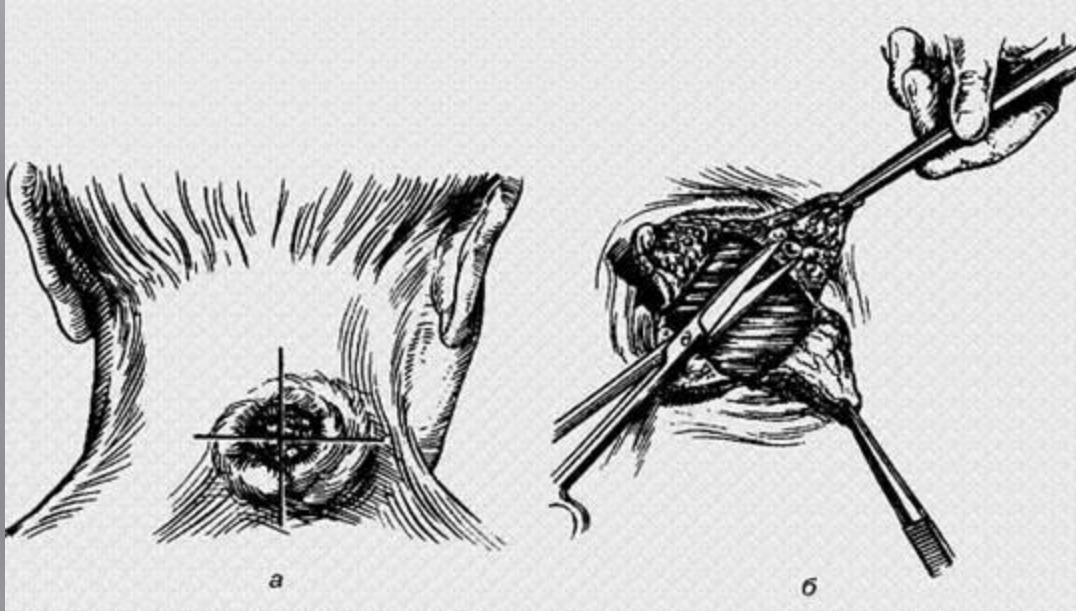
Any condition or treatment that weakens the immune system

cut and drain the carbuncle



# carbunkle





**Skin abscesses are collections of pus within the dermis and deeper skin tissues.**



# Hidradenitis suppurativa

- ▣ is a common (though rarely diagnosed), chronic skin disease characterized by clusters of abscesses or subcutaneous boil-like "infections" (oftentimes free of actual bacteria) that most commonly affects apocrine sweat gland bearing areas, such as the underarms, under the breasts, inner thighs, groin and buttocks. The disease is not contagious.





# Stages

- ▣ Harley stage 1: In some cases, early symptoms, such as itching or discomfort, may precede the condition's characteristic manifestations.
- ▣ Harley stage 2: Recurrent abscesses form, with tract formation and scar formation. There may be single or multiple widely separated lesions.
- ▣ Harley stage 3: Diffuse or near-diffuse involvement or multiple interconnected tracts and abscesses are observed across the entire area.

# Treatment

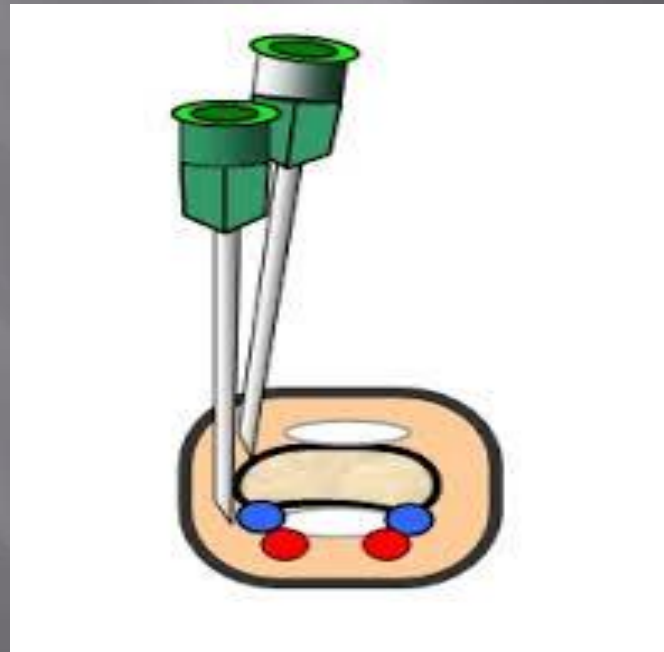
- ▣ Treatment depends on what clinical stage a patient is at and the severity of their condition. Furthermore, what works for one patient may not work for another. Mild HS can usually be managed with home remedies such as the application of warm compresses, good hygiene, antibacterial soaps, antiseptics, anti-inflammatory medication, and wearing loose-fitting clothing. It is also important for HS patients to maintain a healthy weight and to not smoke. Overweight individuals experience more friction on their body which irritates the skin.

# Treatment

- ▣ Moderate and severe cases of HS may require medications. Possible medications include antibiotics, oral retinoid medication, anti-inflammatory drugs, corticosteroids, hormones, and tumor necrosis factor-alpha inhibitors. Other treatments that have been shown to be of some benefit are carbon dioxide laser therapy, laser hair removal, radiation therapy, surgery

# Oberst block anesthesia

- ▣ Maximilian Oberst is credited for introducing a method of block anesthesia ("Oberst-block") for use in minor surgery of the finger



# Oberst block anesthesia



# Paronychia

- ▣ is a nail disease that is an often-tender bacterial or fungal infection of the hand or foot where the nail and skin meet at the side or the base of a finger or toenail. The infection can start suddenly (acute paronychia) or gradually (chronic paronychia)

# Paronychia





# Paronychia

- ▣ Herpetic whitlow and paronychia must be distinguished because the treatments are drastically different. Misdiagnosis and mistreatment may do more harm than good. Once herpetic whitlow is ruled out, one must determine whether the paronychia is acute or chronic and then treat it accordingly

# Paronychia

- ▣ The treatment of choice depends on the extent of the infection. If diagnosed early, acute paronychia without obvious abscess can be treated nonsurgically. If soft tissue swelling is present without fluctuance, the infection may resolve with warm soaks 3-4 times daily

# Paronychia

- ▣ Patients with extensive surrounding cellulitis or with a history of diabetes, peripheral vascular disease, or an immunocompromised state may benefit from a short course of antibiotics. An antistaphylococcal penicillin or first-generation cephalosporin is generally effective; clindamycin and amoxicillin-clavulanate are also appropriate.

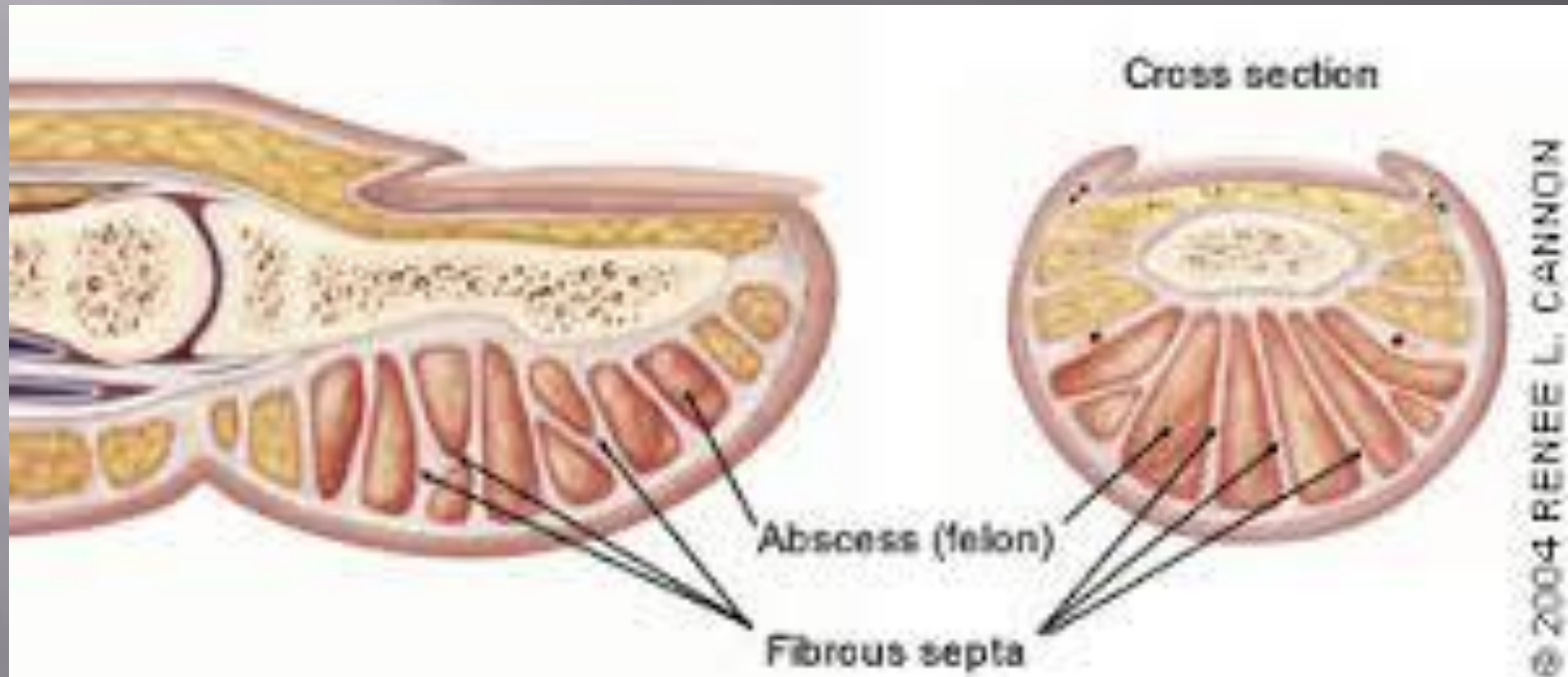
# Paronychia

- ▣ If an abscess has developed, however, incision and drainage must be performed. Surgical debridement may be required if fulminant infection is present

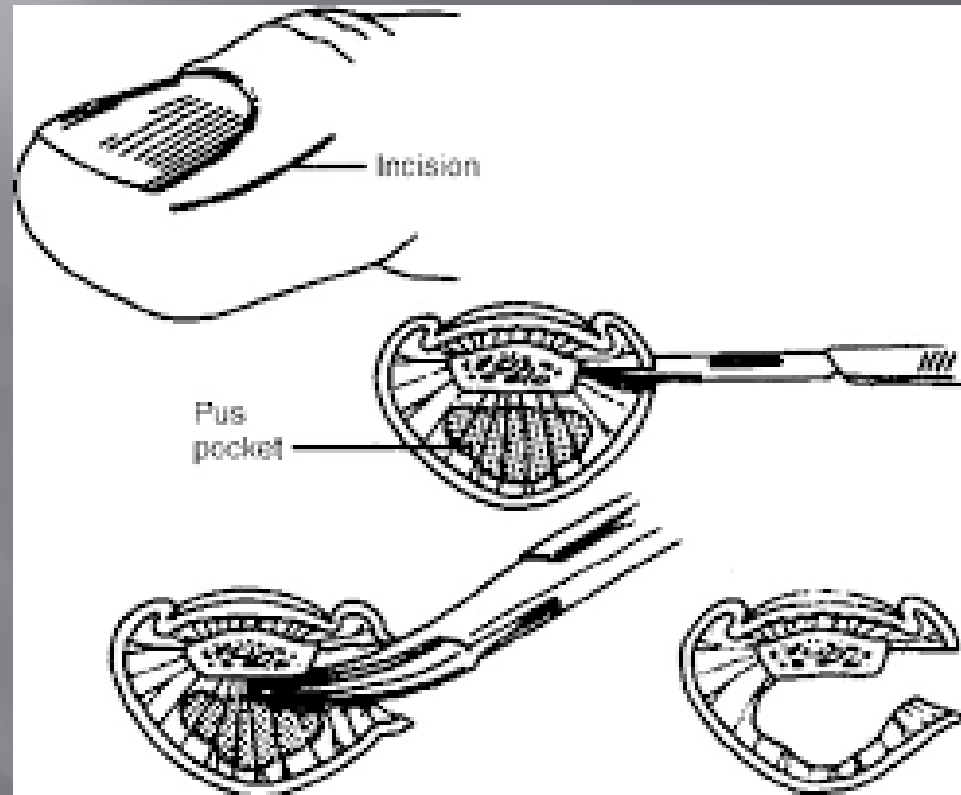
# Felon

- ▣ Is an abscess of the fingertip along the volar skin pad . The fingertip is swollen and quite painful. Without proper treatment, the infection, can progress and cause serious complications .Necrosis of the fingertip skin, osteomyelitis (infection of the underlying bone), and even flexor tenosynovitis may result.

# Felon



# Felon



# Acute Suppurative Flexor Tenosynovitis.

- ▣ The flexor tendons of the fingers travel within the confines of the surrounding flexor sheath. This anatomic arrangement allows the smooth gliding action of the flexor tendons, which is responsible for optimal finger flexion and hand function. The sheath around the flexor tendons of the fingers runs from the distal palmar skin crease of each finger to just proximal to the DIP joint crease. It is essentially a closed space.



- ▣ *Acute suppurative flexor tenosynovitis is potentially a serious infection and must be treated expeditiously.*

