

# HAND INFECTIONS

## Possible outcomes

- Pain
- Stiffness
- Contracture
- Tendon rupture
- Amputation
- Death

## Causes

- Surgery
- Contaminated trauma
- Puncture wound
- Bite
- Septic injection
- Persistent foreign body
- Burn
- Systemic

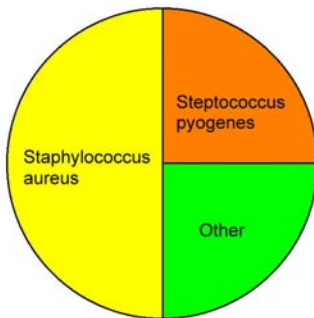
## Anatomical sites

- |               |             |
|---------------|-------------|
| Skin          | Web space   |
| Nail fold     | Deep spaces |
| Apical space  | Dorsum      |
| Pulp          | Bone        |
| Tendon sheath | Joint       |

## Incidences

- |                         |     |
|-------------------------|-----|
| Paronychia              | 36% |
| Felon                   | 26% |
| Cellulitis              | 15% |
| Deep space abscess      | 8%  |
| Subcutaneous abscess    | 6%  |
| Tendon sheath infection | 5%  |
| Other                   | 4%  |

## Microbiology



- |               |   |                 |
|---------------|---|-----------------|
| Pulp space    | } | Staphylococci   |
| Abscess       |   |                 |
| Tendon sheath |   |                 |
| Cellulitis    | } | Streptococci    |
| Bite          |   |                 |
| Paronychia    |   |                 |
| Joint         | } | Mixed anaerobes |

## Atypical infections

- Mycobacteria
- Herpetic whitlow
- Gonorrhoea
- Clostridia
- Cat scratch disease
- Fungal
- Synergistic infections

## Mimics of infection

- Gout
- Pseudogout
- Rheumatoid arthritis
- Pyogenic granuloma
- Calcifying tendonitis
- Pyoderma gangrenosum
- Granuloma annulare
- Metastasis

## History

- Personal & health details
- Initial Injury?
- Symptoms
- Systemic Illness

## Occupation

- |                |                   |
|----------------|-------------------|
| Bite           | Anaerobes         |
| Medical        | Herpes            |
| Water          | Mycobacteria      |
| Slaughterhouse | Erysipelophrix    |
| Farmer         | Orf               |
| Barber         | Pilonidal abscess |

## Pre-disposition

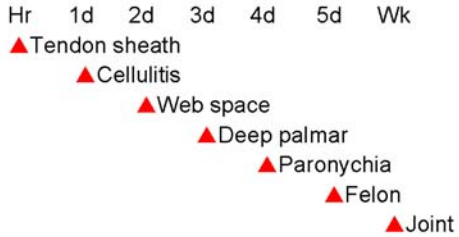
- Diabetes
- Immunosuppression
- Vascular disorders
- Peripheral neuropathy

# HAND INFECTIONS

## Symptoms

Pain  
Loss of function  
Systemic

## Timing



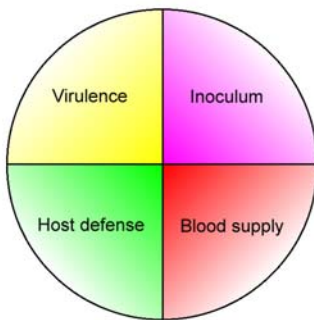
## Signs

Pus	Protection
Erythema	Immobility
Swelling	Lymphangitis
Tenderness	Lymphadenopathy
Posture	Radiological

## Radiography

Porosis  
Erosions  
Fracture  
Foreign body  
Gas

## Infection quartet



## Treatment quintet



## Surgery

Tourniquet  
No exsanguination  
Appropriate incision  
Debridement  
Irrigation  
Secondary closure

## Incisions

- ✓ Extendable
- ✓ Left open
- ✗ Cross flexion creases
- ✗ Create narrow flaps
- ✗ Damage deep structures
- ✗ Open uninvolved tissue planes
- ✗ Leave sensitive scars

## Antibiotics

Staphylococci	Flucloxacillin Erythromycin (ps)
Streptococci	Penicillin Amoxycillin Erythromycin (ps)
Mixed	Amoxycillin Tetracycline +Metronidazole (bite)

## Antibiotic usage

Obtain cultures before administration  
Not a substitute for surgical drainage  
High doses are indicated  
Parenteral route initially

## Review

Regular surveillance essential

- Systemic
- Local signs
- Microbiology
- Antibiotics

Re-explore if no improvement

## Conclusion

Eliminate infection whilst restoring and preserving function.