



Common bacterial skin infections

# Cellulitis

- A localized area of soft tissue inflammation with skin infiltration with white cells, capillary dilatation and proliferation of bacteria.
- Staph aureus and Strep progenies gain entry through break in skin integrity. Exposure of open laceration to fresh lake water may be contaminated with *Aeromonas hydrophilus*, and *Vibrio vulnificus* in case of sea water.
- Infection may spread rapidly through lymphatics and blood. Spread occurs more rapidly with edema. (elevate the part!)



# Treatment

- Streptococcal - Penicillin
- Staphylococcal - penicillinase-resistant penicillin
- Fresh water injury - penicillinase-resistant penicillin and Aminoglycoside



# Folliculitis

- An infection of hair follicles with staph aureus. However, there is a gram negative variant (*pseudomonas aeruginosa*) acquired in hot tubs.
- Usually occurs after maceration under shoulder pads or sweaty garments, while hot tub folliculitis is associated with whirlpools, hot tubs, swimming pool etc.
- May develop on legs, arms, and trunk of wrestlers and may spread further by skin trauma. Occasionally, may involve deeper tissues to become furunculosis, although most heal spontaneously and hot tub folliculitis is self-limiting within 7 - 10 days.



# Treatment

- Astringents and Benzoyl peroxide
- Warm compresses
- Regular hand washing
- Wash contact clothing at high temperature
- Antibiotics effective against staph aureus if necessary



# Impetigo

- Superficial skin infection caused by Staph aureus (80%), B-hemolytic strep (10%) or both. There are bullous forms (large blisters, less common) and non-bullous forms, the latter characterized by small, clear to amber, vesicles that rupture quickly to form a honey-colored crust.
- Epidemiology - most common in children and young adults, and most prevalent in Summer and Fall, but also common in wrestlers, swimmers, gymnasts, football and soccer players.



# Treatment

- Bactroban ointment x 10 days
- Beta-lactase resistant antibiotics
  - Dicloxacillin
  - Cephalosporin
- General
  - Local cleansing with hydrogen peroxide
  - Avoid sharing equipment and towels
  - No participation until lesions dry and medically treated
- NCAA
  - No new lesions for 48 hours and/or completion of 3 days of treatment



# Paronychia

- Trauma to the cuticle allows entry of bacteria. Nail biting, manicuring etc. are often involved but health care workers and food processors are prone to fungal infection as frequent water immersion, soaps or detergents will remove protective skin oils leaving the skin dry and vulnerable.
- Infection can be very painful. Pus, along with the cardinal signs of infection, is usually present.
- Acute paronychia is usually bacterial, most often staph aureus, while chronic paronychia is most often caused by yeast.





# Treatment

- Acute infections may need decompressed by incision, usually parallel to the nail fold but entering the cuticle proximally. Local anesthesia will suffice.
- Antibiotics effective against staph aureus may be necessary although effective drainage, a basic surgical principle, may make this unnecessary.



# Felon

- A closed-space infection of distal pulp of finger. It presents with swelling and tension in fingertip pulp. If advanced, there is throbbing pain initially improved with elevation of the hand.
- Rare, but potentially serious, consequences of inadequate treatment include tuft necrosis, osteomyelitis, and flexor tenosynovitis.



# Treatment

- Incision and drainage under local anesthesia.
- Incision should be unilateral - 0.5 cms distal to distal crease to free edge of nail. The tissue can be "opened" by blunt dissection to promote drainage of pus. The old-fashioned bilateral "fish mouth" incision is no longer favored.
- Antibiotics effective against staph aureus may be necessary although effective drainage, a basic surgical principle, may make this unnecessary.

