Necrotizing soft-tissue infection (NSTI)

- Severe pain can precede any abnormal skin findings
- Imaging modalities are insensitive for the diagnosis
- NSTI includes fasciitis, myositis, and cellulitis or combination

Necrotizing Fasciitis

- Polymicrobial (type 1)
    - Aerobic and anaerobic usually in older adults with comorbidities (DM)
- Monomicrobial (type 2), usually streptococcus and staphylococcus
    - Any age and no comorbidities

Necrotizing Myositis

- Streptococcus
- Clostridial myonecrosis - gas gangrene
    - *S*pontaneous - *Clostridium septicum*
        - colorectal malignancy is a well-recognized risk factor
    - *Traumatic – Clostridium perfringens*
    - Gynecologic – *Clostridium sordellii*
    - *Fournier gangrene – GNB and anaerobes*

Necrotizing Cellulitis - usually anaerobic

- Polymicrobial
    - The presence of vesicles in a background of purpura is extremely suggestive, in the setting of shock, the probability of necrotizing infection is >90%
- Clostridial usually *perfringens* - indolent presentation

Vibrio vulnificus

- It is another cause of necrotizing cellulitis than can progress to myositis and fasciitis
    - Wound exposed to salt water or shellfish (eg, in the setting of opening oysters)
    - Not wound-associated infection can be caused by eating raw shellfish
    - Most often in pts with underlying liver disease, cases have been reported in pts with comorbidities such as DM and CKD

Treatment

- Surgical exploration and debridement should not be delayed
- Clindamycin (decreases production of toxins) + carbapenem or Pip-Tazo + vanco or dapto
- IVIG for streptococcal TSS
- Both ciprofloxacin and doxycycline can be used for *vibrio vulnificus*