Soft tissue infections in Orthopaedics

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Soft tissue infections

• Primary or Secondary
• Most common secondary infection due to surgery
  – Relevance of presence of implants
  – Glycocalyx etc
• Primary infections common indication for admission
Primary ST Infections

- Cellulitis
- Erysipelas
- Abscesses
- Necrotising fasciitis
- Myositis
- Pyomyositis
- Gas gangrene
- Toxic Shock Syndrome
Cellulitis

• Infection of subcutaneous tissues
  – Erythema
  – Warmth
  – Lymphangitis
  – Lymphadenopathy

• Commonest organism Group A Strep
  – + Staph aureus

• Rx with Abx & elevation

• NB - ?USS for abscess
Erysipelas

• Infection of superficial soft tissues
  – Progressively enlarging demarcated red raised painful plaque
  – Commonest organism Group A Strep
  – Diabetics also Staph, enterobacter, clostridia
  – Rx with IV Abx
  – Diabetics may need debridement
    • ?Necrotising fasciitis/gas gangrene
    • Cultures
Abscesses

- Collection of pus
- Any site
- Local pressure effect
- Staph aureus
  - Multiple others
  - Esp immunocompromised/IVDU
- Rx with formal I & D then Abx
- May need USS to confirm
Necrotising fasciitis

- Aggressive & life-threatening
- Post-op or trauma
- After Strep skin infection
- Group A Strep
  - Clostridia
  - Polymicrobial (mixed aerobe/anaerobe)
- Rx with radical debridement & IV Abx
- Plastic surgery
Gas gangrene

• Muscle infection in grossly contaminated wounds
  – Pain, oedema & foul smelling serosanguinous discharge
  – X-rays show gas in soft tissues

• Clostridium spp (usu perfringens)
  – Exotoxin producing
  – Cause oedema, muscle & fat necrosis, local thrombosis
Gas gangrene contd

- Severe pain
- High fever
- Rigors
- Tachycardia
- Confusion
- Surgery with fasciotomy & radical debridement + Abx
- ?Role for hyperbaric $O_2$ Rx
Toxic Shock Syndrome

- Staph aureus
  -Usu post-op
  -Systemic reaction caused by bacterial toxin
  -Fever, hypotension & macular rash with serous exudate
  -Wound may look rel benign
  -Rx with resuscitation Abx & wound debridement when necessary
  -Can be fatal
  -Rarely Strep (Grp A, B, C or G)
Myositis

- Inflammation of muscles
- Pts can be toxic
-Usu autoimmune but can be bacterial
  - Strep
- High CK
- High CRP & ESR
- Imaging ± debridement may be necessary
Pyomyositis

- Bacterial infection of muscle causing abscess
- More common in tropics
-Usu Staph aureus
- Large muscles
  - Glutes
  - Quads
- Rx debridement + Abx
Orthopaedic infections - summary

• Primary vs secondary
• Recognise & resuscitate sick pts
• Imaging to diagnose deep abscesses
• Radical debridement when necessary
• Liaise with microbiology