WOW! Your Face is Swollen:
Pharmacologic Management of Orofacial Infections
Hosted by the
Chicago Dental Society
156th Virtual Midwinter Meeting
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I. Choosing an Antibiotic
A. Identification of Microorganism
B. Determine Antibiotic Sensitivity - MIC
C. Low Host Toxicity
D. Bactericidal
E. Low Resistance Potential
F. Antibiotic resistance occurs with
   1. inadequate dose
   2. inadequate duration
   3. repeated administration
   4. topical administration

II. Types of Penicillins
A. Penicillin V-semisynthetic
   1. bactericidal
   2. narrow spectrum
   3. acid stable
   4. beta lactamase labile

Rx  Penicillin V Tablets 500 mg
Disp: 30 tablets
Sig: Take two tablets to start, then one tablet
every six hours until all tablets are gone
for infection

B. Amoxicillin
   1. bactericidal
   2. broad spectrum
   3. acid stable
   4. beta lactamase labile
C. Amoxicillin/Clavulanic acid (Augmentin®)
   1. used for beta lactamase microorganisms
   2. 500 mg every eight hours

- **Subacute Bacterial Endocarditis**

  **Antibiotic Prophylaxis**

  **Cardiac Conditions Associated with the Highest Risk of**
  **Adverse Outcome from Endocarditis for Which Prophylaxis**
  **With Dental Procedures is Recommended**

  1. prosthetic cardiac valves, including transcatheter-implanted protheses and homografts
  2. prosthetic material used for cardiac valve repair (annuloplasty rings and chords)
  3. a history of infective endocarditis
  4. a cardiac transplant with valve regurgitation due to a structurally abnormal valve
  5. the following congenital (present from birth) heart disease:
     a. unrepaired congenital cyanotic heart disease, including palliative shunts and conduits
     b. any repaired congenital heart defect with residual shunts or valvular regurgitation at the site of or adjacent to the site of a prosthetic patch or prosthetic device

  **SBE prophylaxis antibiotics**

  **Rx** Amoxicillin tablets 500 mg
  Disp: 4 tablets
  Sig: Take four tablets by mouth 30-60 minutes before dental appointment

  **Rx** Cephalexin tablets 500 mg
  Disp: 4 tablets
  Sig: Take four tablets by mouth 30-60 minutes before dental appointment

  **Patients who are allergic to penicillins**

  **Rx** Clindamycin tablets 150 mg
  Disp: 4 tablets
  Sig: Take four tablets by mouth 30-60 minutes before dental appointment
Rx  Azithromycin tablets 250 mg
    Disp: 2 tablets
    Sig: Take two tablets by mouth 30-60 minutes before dental appointment

Rx  Clarithromycin tablets 250 mg
    Disp: 2 tablets
    Sig: Take two tablets by mouth 30-60 minutes before dental appointment

Antibiotic Prophylaxis for Patients with Orthopedic Prostheses

“The ADA and the American Academy of Orthopaedic Surgeons have found that the evidence does not support routine prescription of antibiotic prophylaxis for joint replacement patients undergoing dental procedures. This finding is based on a collaborative systematic review of the scientific literature.” -www.ada.org/news

“In 2014, the ADA Council on Scientific Affairs assembled an expert panel to update and clarify the clinical recommendations found in the 2012 evidence-based guideline, Prevention of Orthopaedic Implant Infection in Patients Undergoing Dental Procedures. As was found in 2012, the 2014 updated systematic review found no association between dental procedures and prosthetic joint infections. Based on this review, the 2014 Panel concluded that prophylactic antibiotics given prior to dental procedures are not recommended for patients with prosthetic joint implants.”  www.ada.org

www.ada.org  member center  ADA library and archives
oral health topics  “A”  antibiotic prophylaxis

www.orthoguidelines.org

“Appropriate Use Criteria”
III. **Cephalosporins**
   A. **Properties**
      1. bactericidal
      2. broad spectrum
      3. acid stable (oral forms)
      4. beta lactamase stable/labile
   B. Synthesized in generations: first generation (cephalexin-Keflex), (cefadroxil-Duricef) most effective against gram positive strep or staph- higher generations more effective against gram negative
   C. Cross-sensitivity with penicillin probably extremely low ~5%

IV. **Clindamycin (Cleocin)**
   A. **Properties**
      1. bacteridical/static
      2. broad spectrum
      3. acid stable
   B. Adverse effects
      - pseudomembranous colitis (PMC)/ulcerative colitis caused by *Clostridium difficile*

V. **Extended Spectrum antibiotics**
   A. clarithromycin (Biaxin)-**NOT with calcium channel blockers**
   B. azithromycin (Zithromax)

VI. **Tetracyclines**
   A. Bacteriostatic/broad spectrum
   B. Adverse Reactions
      1. GI Distress/Nausea
      2. hepato/renal toxicity
      3. teeth/bone pathology
      4. superinfection
      5. photosensitivity
   C. Drug Interactions
      1. iron/antacids/dairy products
      2. oral contraceptives
      3. oral anticoagulants
      4. other antimicrobials
   D. **Tetracyclines are contraindicated with penicillins**
VII. Metronidazole (Flagyl)
   A. Bactericidal
   B. Broad spectrum
   C. Adverse effects
      1. gastrointestinal
      2. oral effects
      3. CNS effects
      4. renal toxicity
      5. hematopoietic system
   D. alcohol is contraindicated with metronidazole

VIII. Antifungals
   A. nystatin (Mycostatin) - topical
   B. clotrimazole (Mycelex) - topical
   C. fluconazole (Diflucan) – systemic

   Rx Diflucan tablets 100mg
   Disp: Fifteen tablets
   Sig: Take two tablets by mouth the first day then
   one tablet daily for thirteen days

IX. Antiviral
   A. idoxuridine (Stoxil, Herplex)
   B. acyclovir (Zovirax)

   Rx Zovirax Ointment 5%
   Disp: 15 gm
   Sig: Apply small amount to affected area
   every three hours six times a day for
   7 days

   C. valacyclovir (Valtrex)-systemic
      - metabolite of acyclovir
      - approved for herpes simplex
      - 2 Grams orally twice a day (twelve hours apart) for
        one day
   D. penciclovir (Denavir)

   Rx Denavir Cream 1%
   Disp: 2 Gm tube
   Sig: Apply small amount of cream to affected
   areas every two hours during waking
   hours for four days
E. docosanol (Abreva)
   - 10% cream
   - only OTC topical preparation approved by FDA
   - expensive

X. **Aphthous Ulcers**
A. Amlexanox (Aphthasol)
B. Debacterol
   - sulphonated phenols and sulphuric acid
C. silver nitrate sticks
D. Alum
E. Cola drinks

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