## 10 Antibiotic Therapy of the Principal Infections in Children and Adults

Antibiotic dosages are given only if they differ from the recommendations in Chap. 9.

### Actinomycosis

**Pathogens:**
*Actinomyces* species (principally *A. israelii*)

**Primary Therapy:**
Penicillin G 10–20 IU/day or ampicillin 50 mg/kg/day i.v. 4–6 weeks, then penicillin V 2–4 g/day or amoxicillin 500 mg p.o. q8h

**Alternatives:**
Doxycycline, clindamycin, ceftriaxone; in penicillin allergy/pregnancy: erythromycin, roxithromycin

**Remarks:**
Surgical intervention is frequently necessary. Treatment duration 3–6 months for thoracic or abdominal actinomycoses; 3–6 weeks for cervicofacial forms

### Amebiasis

**Pathogen:**
*Entamoeba histolytica* (not *E. dispar*)

**Therapy (intestinal form):**
Metronidazole 500–750 mg p.o. q8h for 10 days, then paromomycin 500 mg p.o. q8h for 10 days
Remarks:
Owing to the danger of tissue invasion, asymptomatic excreters of *E. histolytica* should also be treated (with paromomycin only, 500 mg p.o. q8h for 7 days); intestinal lumen amebicide to prevent recurrence. In severe or extraintestinal infections (e.g. liver abscess): start with metronidazole i.v. for 10 days, then paromomycin for 7 days. In case of abscess greater than 3 cm, surgical aspiration might be required.

### Amnionitis, Septic Abortion

**Most Frequent Pathogens:**
Bacteroides and other anaerobic bacteria, group A and B streptococci, enterobacteria, *C. trachomatis*

**Primary Therapy:**
Ampicillin/sulbactam + doxycycline (see remarks)

**Alternatives:**
Cephalosporins (3rd gen.) + clindamycin, ertapenem + doxycycline

**Remarks:**
Doxycycline is contraindicated in pregnancy

### Arthritis

**Most Frequent Pathogens:**
- Adults: *S. aureus*, gonococci, *Kingella kingae*; after surgery or joint puncture: *S. epidermidis* (40%), *S. aureus* (20%), streptococci, *Pseudomonas*
  Chronic monarthritis: brucellae, mycobacteria, nocardiae, fungi  
  After foreign body implantation: *S. aureus*, *S. epidermidis*
• Infants: *S. aureus*, enterobacteria, group B streptococci, gonococci

**Primary Therapy:**
- Adults: oxacillin or flucloxacillin + cephalosporin (3rd gen.)
  After joint puncture: vancomycin + cephalosporin (3rd gen.)
  Chronic monarthritis: according to pathogen
- Children and infants: oxacillin or flucloxacillin + cephalosporin (3rd gen.)

**Alternatives:**
- Adults: oxacillin or flucloxacillin + ciprofloxacin
- Children and infants: oxacillin or flucloxacillin + aminoglycoside

**Remarks:**
Gram staining and methylene blue staining of pus and of blood cultures usually provide important clues to the pathogen. Surgical consultation and sometimes intervention is necessary. If MRSA rate high: vancomycin instead of oxacillin/flucloxacillin.
Intra-articular instillation of antibiotics is not recommended.
Treatment duration (2–)3 weeks in adults, (3–)4 weeks in children and infants; 4–6 weeks in infections of prostheses. For monoarticular arthritis: if Gram-stain suggests *S. aureus*: oxacillin/flucloxacillin or 2nd generation cephalosporin; if Gram-stain is negative: 3rd generation cephalosporin, e.g. ceftriaxone, cefotaxime, ceftizoxime. For gonococcal arthritis: ceftriaxone 1 g for 7–10 days.
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