### EXTREMITY WOUNDS

- Significant skin soft tissue with **NO** open fractures, preferred agent is cefazolin 2 grams IV X 1 dose. (Alternative agent is clindamycin 600mg IV X 1 dose in penicillin allergic patients)
- Skin, soft tissue with open fractures, exposed bone or open joints, preferred agent is cefazolin 2 grams q6-8h for 72 hours or 24 hours post-coverage, whichever comes first. (Alternative agent is clindamycin 600mg IV q8h in penicillin allergic patients)
  - For type IIIB – IIIC lower extremity injuries gentamicin could be considered as an additional agent (7 mg/kg adjusted body weight once daily x 3 days, with normal renal function)
  - Antibiotics should ideally be administered within 3 hours of injury.

### CHEST TUBES

No antibiotics indicated.

### NEUROSURGICAL/CRANIO TOMY/SINUSES

CRANIO TOMY: cefazolin, 2 g IV, one dose immediately pre-op

OPEN SKULL FX: nafcillin (2 g IV q 4 hours) and ceftriaxone (2 g IV q 12 hours) x 72 hours or 24 hours after washout and coverage, whichever comes first.

PENETRATING BRAIN/CNS INJURY: All penetrating wounds will be washed out with a minimum of 1L of sterile saline and closed within 6 hours of arrival to the hospital (excluding injuries to the mouth or globe). This may be done in the operating room or at the bedside. Nafcillin (2 g IV q 4 hours) and ceftriaxone (2 g IV q 12 hours) x 72 hours or 24 hours after washout and coverage, whichever comes first.

VENTRICULOSTOMY, ICP MONITOR: No antibiotics.

CSF LEAK: No antibiotics.

PNEUMOCEPHALY: No antibiotics.
**When monitoring CSF for infection, if CSF develops pleiocytosis or other evidence of infection, begin vancomycin and cefepime and adjust appropriately to culture growth.**

**FACIAL FRACTURES**

Mandible fractures: clindamycin 600 mg IV q 8 hours upon admission and continued x 72 hours or 24 hours after fixation, whichever comes first.

Closed facial fractures (non-mandible fractures): No prophylactic antibiotics for non-operative fractures. For fractures requiring operative therapy, 24 hours of perioperative antibiotics

**GU TRAUMA**

- Perioperative coverage as for abdominal trauma.

- No need for antibiotics for drains, or suprapubic catheters.

- Scrotal or Penile Trauma: Immediate debridement and cefazolin (1 gm IV q 8 hours) x 24 hours.

**URINARY TRACT INFECTION (EMPIRIC)**

If PO access available/functional: TMP/SMX 160 mg q 12 hours

If NPO or non-functional gut: ceftriaxone 1 g q 24 hours.

***Treatment for complicated UTI (all males, females with previous catheter) should receive 7 days of antibiotic therapy tailored to susceptibility.

**SINUSITIS**

Afrin and normal saline lavage for 5 days
D/C all nasal tubes
If persistent, obtain CT of sinuses. If positive for sinusitis, amoxicillin 500 mg PO q 8 hours for 5 days (Alternative for penicillin allergy, azithromycin 500 mg X 1, then 250 mg q 24 hours)

**PNEUMONIA (empiric)**
Gram positive (vancomycin 2 g loading dose once, then dosed based on body mass and renal function) and Gram negative coverage (cefepime 1 gm IV q 6 hours). May add gentamicin if non-responsive after 24 hours or patient has been previously treated (dosed as either once-daily or pharmacokinetic dosing)

**BILIARY TRACT SURGERY**

The biliary tract is normally sterile, with only a low rate of colonization. Antimicrobial prophylaxis in biliary surgery has been recommended only for high-risk patients—defined as those who are >60 years of age, those with common duct stones, bile duct obstruction, recent acute cholecystitis, or prior operations on the biliary tract.

If prophylaxis is required, use cefazolin 1 g immediately pre-operatively, redosed every 4 hours. Antimicrobial prophylaxis is not required post-operatively.

**COLON SURGERY**

Antimicrobial prophylaxis for colon procedures is controversial. Studies have documented the efficacy of either a parenteral or oral route. The most common practice in the United States is oral antibiotic administration along with mechanical bowel cleansing the evening before the operation and parenteral antibiotic administration in the operating room just before the incision. The choice of antibiotics for lower GI surgery requires an agent with activity against both aerobic, facultative enteric bacteria, and the obligate anaerobes of the colon, including *Bacteroides fragilis*. Cefoxitin or a combination of cefazolin and metronidazole are recommended.

The recommended parenteral coverage is cefoxitin 1 g immediately preoperatively. It may be redosed depending upon the length of the case. Antimicrobial prophylaxis is not generally required for greater than 12 hours post-operatively.

**References:**


