

## **Antibiotic Prophylaxis in Penetrating Abdominal Trauma**

Post-operative infection rates for penetrating abdominal trauma (PAT) are 7-16%. Multiple factors increase the risk: hollow viscus injury (HVI), presence of intestinal contamination, patient age, transfusion requirement and shock.

Major bacterial infections from PAT:

- Streptococcus
- Enterobacter
- Peptostreptococcus
- Enterococcus
- Bacteroides
- Clostridium

Second generation cephalosporins and extended spectrum penicillins are as effective as regimens that involve the use of aminoglycosides with multidrug antibiotics. They also offer “one drug” therapy.

Antibiotic agent should be infused prior to surgical intervention and, if no HVI is identified, no further antibiotics are necessary. If there is HVI with intestinal contamination, the antibiotics should be halted after the first 24hrs post-procedure. There is no proven therapeutic benefit to longer duration of antibiotic coverage and may increase the complication rate.

Purpose:

Standardize antibiotic regimen for penetrating trauma to the abdomen.

Intervention:

1. Cefoxitin (Mefoxin) 2 gm IV prior to surgical therapy
  - a. Halt post-operatively if bowel injury not present
  - b. Continue 3 doses post-op (every 8 hrs) if HVI identified
2. Clindamycin 900 mg and Gentamicin (3 mg/kg) IV for penicillin-allergic patients.

### **Order Set:**

Antibiotics for penetrating abdominal trauma –

1. Allergy to PCN Y / N

- N:
1. Cefoxitin 2gm IV prior to surgery
  2. Halt post-op if no hollow viscus injury
  3. 3 doses (2gm IVQ 80) post op if hollow viscus injury

Y: Clindamycin 900 mg IV / Gentamicin 3 mg / kg pre op.

No hollow viscus injury stop Clindamycin / Gentamicin

HVI { Clindamycin 900 mg IV Q 6° x 4 doses post op  
Gentamicin 3 mg 1 kg x 1 dose post op