Surgical Site Infection Prevention Protocol for Total Joint Arthroplasty
(Developed by ID/Stewardship, Infection Prevention & Control, and Orthopaedics)
05/18/2017

Pre-Hospital
☑ Patient Education
☑ 6 Chlorhexidine Gluconate wipes at home the evening before surgery
☑ Pre-operative evaluation and tight control of blood glucose
☑ Smoking cessation w/in 30 days
☑ Stopping all steroid injections for up to 3 months prior to surgery

Pre-operative phase:
☑ Preoperative hair clipping in the ASU
☑ 6 Chlorhexedine Gluconate wipes
☑ Nasal swab Anti-sepsis in the pre-op area

Intra-operative phase:

Anesthesia:
☑ Close maintenance of normothermia
☑ Close maintenance of euglycemia, blood glucose target <180mg/dl
☑ Antibiotic prophylaxis as per chart below, 30-60 minutes prior to incision

Surgeon/House-staff:
☑ Surgical field preparation with alcohol followed by 2% chlorhexidine gluconate -70% isopropyl alcohol or Iodine Povacrylex 0.7% available iodine and 74% isopropyl alcohol
☑ Use of “space suit” helmet, and gown systems for everyone on the surgical field, including relief staff

All Staff:
☑ Scrubs may not be worn outside of the hospital
☑ Entrance to the OR should only through the sub-sterile.
☑ Entrance to the OR suite should be kept closed
☑ OR Room traffic kept to a minimum
☑ Hand hygiene on entry and exit of rooms

Postoperative
☑ Following closure, and cyanoacrylate seal, occlusive dressing placed over the incision
☑ Anesthesiology team provides close maintenance of normothermia in PACU
☑ Maintain glucose below 180mg/dl.
☑ Antibiotics to continue for 24 hours after surgery, but no longer than 24 hours.
☑ Dressing sterility maintenance for 48 hours from the time of surgery
☑ ID consult for suspected infections
I. Preoperative Antibiotic Prophylaxis - NO history of prior infection:

- NKDA patients or non-type I hypersensitivity reaction (unknown or remote, non-urticarial rash, etc.):
  - Cefazolin 1-2g based on age, weight, renal function (see below for dosing guidelines)

- Patients with **immediate hypersensitivity reaction** to either penicillin or cephalosporin should NOT get either agent (hives/urticarial, anaphylaxis, angioedema, facial swelling, bronchospasm, or intubation):
  - Vancomycin (1g for patients ≤ 100kg; 1.5g for patients >100kg; call stewardship for assistance)

II. Preoperative Antibiotic Prophylaxis – joint REVISION after recent infection:

- PLEASE CALL ID/STEWARDSHIP PRIOR TO ALL CASES TO CUSTOMIZE PROPHYLXIS:
  - Patients with history of **MRSA** infections should receive **Vancomycin** (1g for patients ≤ 100kg, 1.5g for patients >100kg) + **Cefazolin 1-2 g** (unless severe beta-lactam allergy)
  - Patients with history of **MSSA** or **Streptococcal** infections should receive **Cefazolin 1-2g**
  - Patients with history of infection with **Gram negatives, Enterococcus**, or **other bacteria** should receive regimen to cover skin flora in addition to specific bacteria – please call ID
  - Patients with **immediate hypersensitivity reaction** to either penicillin or cephalosporin (hives/urticarial, anaphylaxis, angioedema, facial swelling, bronchospasm, or intubation) should receive Vancomycin (1g for patients ≤ 100kg, 1.5g for patients >100kg)

III. Preoperative Antibiotic Prophylaxis – ACTIVE infection:

- **ID consult** and **stewardship approval required** for integration of antibiotics into orthopedic devices during surgery (i.e. vancomycin, gentamicin, tobramycin)
  - Page Dr. Nori at 917-956-3736

- If possible, please hold antibiotic prophylaxis until OR specimens obtained for Gram stain and culture

- Once antibiotic prophylaxis given, please follow recommendations listed in I.

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Dose (IV)</th>
<th>Instructions</th>
<th>Suggested Re-dose time (normal renal function)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cefazolin</td>
<td>1g for weight &lt;60kg, age &gt;80, or CrCl ≤30 ml/min</td>
<td>Slow IV push over 5 min, or infusion over 30-60 minutes</td>
<td>4 hours OR Estimated Blood Loss &gt;1.5L</td>
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<td></td>
<td>2g for weight ≥ 60kg with normal CrCl and age &lt; 80</td>
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<tr>
<td>Vancomycin</td>
<td>1g for weight ≤ 100kg, 1.5g for patients &gt;100kg</td>
<td>DO NOT IV push; avoid infusion reactions: 1g: 60 min infusion 1.5g: 90 min infusion</td>
<td>8-12 hours OR Estimated Blood Loss &gt;1.5L</td>
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References:


Please contact Dr. Priya Nori from ID/Stewardship with any questions (917-956-3736)