Surgical Site Infection Prevention Protocol for Total Joint Arthroplasty
(Developed by ID/Stewardship, Infection Prevention & Control, and Orthopaedics)
4/5/19

Pre-Hospital

☑ Patient Education
☑ 6 Chlorhexidine Gluconate wipes at home the evening before surgery per protocol
☑ Pre-op evaluation & tight control of blood glucose in Diabetics; Target HgbA1C < 8 if age < 70; < 9 if age >70
☑ Smoking cessation strongly emphasized; increased risks discussed with patient
☑ No intra-articular injections for 3 months prior to surgery

Pre-operative phase :

☑ Preoperative hair clipping in the pre-operative area if required
☑ 6 Chlorhexidine Gluconate wipes per protocol
☑ Betadine nasal swab anti-sepsis in the pre-op area

Intra-operative phase:

Anesthesia:

☑ Antibiotic prophylaxis as per chart below, 30-60 minutes prior to incision
☑ The use of antibiotic impregnated cement in patients with DM, CKD, BMI>40 or other conditions at higher risk for infection

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

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 1-1.5g infused slowly; based on weight (see below for dosing guidelines)
II. Preoperative Antibiotic Prophylaxis — **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 infused slowly)
  
  - 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 / Stewardship
  
  - 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** to discuss intra-operative, and post-operative antibiotic selection; page Dr. Nori at 917-956-3736

- If possible, hold antibiotic prophylaxis until OR specimens obtained for culture. Discuss with ID/stewardship if AFB and/or fungal cultures are needed as these are very rare infections. Prioritize aerobic/anaerobic cultures.

### Antibiotic Dosing Guidelines

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>Dose (IV)</th>
<th>Instructions</th>
<th>Suggested intra-op re-dosing interval (nl 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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<tr>
<td></td>
<td>2g for weight ≥ 60kg</td>
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</tr>
<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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</tbody>
</table>

(requires stewardship approval after 72h)

References:


### Postoperative

- Maintain glucose below 180mg/dl.
- Antibiotics to be completed within **24 hours** of surgery for primary cases.
  - Cefazolin 1g Q8H x 2 doses
  - Vancomycin 1g Q12H x 1 dose
- Dressing sterility maintenance for 24 hours from the time of surgery
- ID consult for suspected infections

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