Clinical Guideline
Surgical Antibiotic Prophylaxis Guideline – Plastic and Reconstructive Surgery

Objective file number: 2011-10137
Policy developed by: South Australian expert Advisory Group on Antibiotic Resistance (SAAGAR)
Approved SA Health Safety & Quality Strategic Governance Committee on: 12 August 2014
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Summary
The Surgical Antibiotic Prophylaxis Guideline - Plastic and Reconstructive Surgery guideline provides recommendations on appropriate antibiotic prophylaxis for specific plastic and reconstructive surgical procedures including craniotomy procedures, open reduction and internal fixation of fractures, insertion of prostheses, screws, plates etc, and clean bone or soft tissue surgery.

Keywords
antibiotic, prophylaxis, surgery, plastic, reconstructive, craniotomy, soft, tissue, insertion, prostheses, SAAGAR, Surgical Antibiotic Prophylaxis Guideline, Plastic and Reconstructive Surgery, clinical guideline

Policy history
Is this a new policy? N
Does this policy amend or update an existing policy? Y
Does this policy replace an existing policy? Y
If so, which policies? Surgical Antibiotic Prophylaxis Guideline – Plastic & Reconstructive Surgery (12 Feb 2013)

Applies to
All SA Health Portfolio

Staff impact
All Clinical, Medical, Nursing, Emergency, Dental, Pathology

PDS reference CG083

Version control and change history

<table>
<thead>
<tr>
<th>Version</th>
<th>Date from</th>
<th>Date to</th>
<th>Amendment</th>
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<tbody>
<tr>
<td>1.0</td>
<td>12/02/2013</td>
<td>12/08/2014</td>
<td>Original version</td>
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<tr>
<td>1.1</td>
<td>12/08/2014</td>
<td>current</td>
<td>Vancomycin administration rate, MRSA risk wording</td>
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Pre-Operative Considerations

Consider individual risk factors for every patient – need for prophylaxis, drug choice or dose may alter (e.g. immune suppression, presence of prostheses, allergies, obesity, diabetes, remote infection, available pathology or malignancy).

Pre-existing infections (known or suspected) – if present, use appropriate treatment regimen instead of prophylactic regimen for procedure. Doses should be scheduled to allow for re-dosing just prior to skin incision.

Practice Points

Drug administration
> IV bolus – should be timed ≤ 60 minutes before skin incision (optimal 30 minutes). Administration after skin incision or > 60 minutes before incision reduces effectiveness
> IV infusion – should be timed to end ≤ 30 minutes before skin incision (e.g. metronidazole, vancomycin)

Penicillin/beta-lactam allergy (severe type 1 penicillin or cephalosporin allergy), unless otherwise indicated:
> Replace penicillin or cephalosporin with vancomycin (see vancomycin administration below)
> Add gentamicin IV 2mg/kg when Gram negative cover required

MRSA risk (defined as history of MRSA colonisation or infection, OR inpatient of high risk hospital or unit (where MRSA is endemic) for more than the last 5 days)
> Replace penicillin or cephalosporin with vancomycin (see vancomycin administration below)

Vancomycin administration
> Give vancomycin 1g (1.5g for patients > 80kg) (child < 12 years: 30mg/kg up to 1.5g) by IV infusion at a rate = 1g per hour.

Repeat doses
A single pre-operative dose is sufficient for most procedures, however repeat intra-operative doses are advisable:
> for prolonged surgery (> 4 hours) when a short-acting agent is used (e.g. cephazolin), OR
> if major blood loss occurs, following fluid resuscitation

Recommended Prophylaxis

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Prophylaxis</th>
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<tbody>
<tr>
<td>Craniotomy procedures</td>
<td>cephazolin 1g IV (2g for patients ≥ 80kg) (child &lt; 12 years: 25mg/kg up to 1g)</td>
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<tr>
<td>Open reduction and internal fixation of fractures</td>
<td></td>
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<tr>
<td>Insertion of prostheses, screws, plates, etc</td>
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</tr>
<tr>
<td>Clean bone or soft tissue surgery</td>
<td>Prophylaxis NOT recommended</td>
</tr>
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</table>

Post-Operative Care

Post-operative antibiotics are NOT indicated unless infection is confirmed or suspected, regardless of the presence of surgical drains. If infection is suspected, consider modification of antibiotic regimen according to clinical condition and microbiology results.


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