Pre-Operative Considerations

Prophylaxis is not indicated for intra-oral procedures: dentoalveolar surgery (extractions, impactions, exposures); minor pathology (soft tissue, cysts).

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.

*For patients with cardiac conditions refer to Antibiotic Prophylaxis Guidelines for Prevention of Endocarditis for further information

Practice Points

Drug administration
> IV bolus – should be timed ≤ 60 minutes before skin incision (optimal 30 minutes) [1]. 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. see clindamycin below)

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 five days)
> Add vancomycin to cefazolin (see vancomycin administration below).

Clindamycin administration
> Give clindamycin 600mg (child: 15 mg/kg up to 600mg) by IV infusion over at least 20 minutes, timed to end just before procedure. Repeat 4 hourly intra-operatively for prolonged procedures.

Vancomycin administration
> Give vancomycin 1g (1.5g for patients >80kg actual body weight) by IV infusion started 30-120 minutes before surgical incision and given at a recommended rate of 1g per hour (1.5g over 90 minutes). Note: infusion can be completed after skin incision.

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

Obese patients
> Consider increased dose of cefazolin (3g) if patient is obese (>120kg). Consult ID for advice.

Recommended Prophylaxis

<table>
<thead>
<tr>
<th>Recommended Prophylaxis</th>
<th>*High risk penicillin/cephalosporin allergy</th>
</tr>
</thead>
<tbody>
<tr>
<td>No incision through mucosal (oral, nasal, pharyngeal, oesophageal) surface</td>
<td>cefazolin 2g IV (child: 30mg/kg up to 2g)</td>
</tr>
<tr>
<td>High risk of MRSA: ADD vancomycin 1g IV infusion (1.5g for patients &gt; 80kg actual body weight)</td>
<td>clindamycin 600mg IV infusion (child: 15mg/kg up to 600mg)</td>
</tr>
<tr>
<td>With incision through mucosal (oral, nasal, pharyngeal, oesophageal) surface</td>
<td>cefazolin 2g IV (child: 30mg/kg up to 2g)</td>
</tr>
<tr>
<td>PLUS</td>
<td>metronidazole 500mg IV infusion (child: 12.5mg/kg up to 500mg)</td>
</tr>
<tr>
<td>High risk of MRSA: ADD vancomycin 1g IV infusion (1.5g for patients &gt; 80kg actual body weight)</td>
<td>clindamycin 600mg IV infusion (child: 15mg/kg up to 600mg)</td>
</tr>
<tr>
<td>Other uncomplicated or minor clean procedures (e.g. tonsillectomy, adenoidectomy, tympanostomy, nasal septoplasty, endoscopic sinus surgery, uncontaminated neck dissection)</td>
<td>Prophylaxis NOT recommended</td>
</tr>
</tbody>
</table>

Post-Operative Care

Except where included above, 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 accordingly to clinical condition and microbiological results.
Definitions / Acronyms

DRESS  Drug rash with eosinophilia and systemic symptoms
ID   Infectious Diseases
IV  Intravenous
MRSA  Methicillin-resistant Staphylococcus aureus
SJS / TEN  Stevens-Johnson syndrome / Toxic epidermal necrolysis

* High Risk penicillin/cephalosporin allergy: History suggestive of high risk (eg. anaphylaxis, angioedema, bronchospasm, urticaria, DRESS/SJS/TEN)

References


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