Oral or topical antibiotics for impetigo

Report by Jane McVicar, Clinical Fellow
Search checked by Vince Choudhery, Specialist Registrar

Clinical scenario
A 3 year old child is brought into the emergency department with a crusty yellow rash on the forehead. She is systemically well and a diagnosis of impetigo is made. You wonder whether oral or topical antibiotics are better.

Three part question
In [a systemically well child with impetigo] do [oral or topical antibiotics] offer [better clinical effectiveness and/or fewer side effects]?

Search strategy
Medline 1966 to 6/99 using the OVID interface. (exp impetigo OR impetigo.mp) AND (exp antibiotics OR antibiotics$.mp) AND maximally sensitive RCT filter LIMIT to human and english.

Table 3

<table>
<thead>
<tr>
<th>Author, date, and country</th>
<th>Patient group</th>
<th>Study type (level of evidence)</th>
<th>Outcomes</th>
<th>Key results</th>
<th>Study weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Villiger et al, 1986,*</td>
<td>200 patients with skin infections presenting in general practice</td>
<td>PRCT</td>
<td>Cure rate</td>
<td>86% v 47% v 76%</td>
<td>Undifferentiated skin infections No randomisation of oral antibiotics</td>
</tr>
<tr>
<td>Goldfarb et al, USA, 1989*</td>
<td>62 patients with impetigo under 13 years old in a childrens hospital</td>
<td>PRCT</td>
<td>Rate of response</td>
<td>Faster with mupirocin Not blinded</td>
<td></td>
</tr>
<tr>
<td>Barton et al, USA, 1989*</td>
<td>97 patients with impetigo under 16 years old in paediatric outpatients</td>
<td>PRCT</td>
<td>Clinical response rate</td>
<td>More failures with erythromycin No statistical analysis</td>
<td></td>
</tr>
<tr>
<td>Mertz et al, Puerto Rico, 1989*</td>
<td>75 patients with impetigo over 6 months old in public health clinics</td>
<td>PRCT</td>
<td>Clinical response rate</td>
<td>71% v 65% No statistical analysis</td>
<td></td>
</tr>
<tr>
<td>Britton et al, USA, 1990*</td>
<td>54 patients with impetigo under 14 years old in paediatric outpatients</td>
<td>PRCT</td>
<td>Adverse effects</td>
<td>100% for both Better in mupirocin group</td>
<td></td>
</tr>
<tr>
<td>Dagan and Bar-David, Israel, 1992*</td>
<td>102 patients with impetigo under 16 years old in paediatric outpatients</td>
<td>PRCT</td>
<td>Clinical response rate</td>
<td>0% v 13%</td>
<td></td>
</tr>
<tr>
<td>Rice et al, USA, 1992*</td>
<td>93 patients with impetigo under 16 years old in paediatric emergency room and primary care clinics</td>
<td>PRCT</td>
<td>Clinical response rate</td>
<td>13 patients lost from study</td>
<td></td>
</tr>
<tr>
<td>Bass et al, USA, 1997*</td>
<td>26 children with impetigo with a mean age of 3.8 years</td>
<td>PRCT</td>
<td>Failure rate</td>
<td>—</td>
<td></td>
</tr>
</tbody>
</table>

PRCT = prospective randomised controlled trial.

Search outcome
Sixty nine papers were found of which 60 were irrelevant. The remaining nine papers are shown in table 3.

Comment
All the trials indicate that topical mupirocin is as effective as oral erythromycin and has fewer systemic side effects. Only one trial looked at the relative efficacy of oral flucloxacillin.

Clinical bottom line
Topical mupirocin is the first treatment of choice in systemically well children with impetigo.

### Conservative or surgical management for first patellar dislocation

**Report by Martin Thomas, Research Fellow**  
**Search checked by Paul Wallman, Specialist Registrar**

**Clinical scenario**  
A 20 year old woman presents to the emergency department having suffered her first lateral patellar dislocation one hour before. She has managed to reduce it herself. You wonder whether surgery is superior to conservative management.

**Three part question**  
In [patients with primary patellar dislocation] is [surgery better than conservative treatment] in [reducing symptoms and preventing redislocation]?

**Search strategy**  
Medline 1966 to 6/99 using the OVID interface. (exp patella OR patella$.mp) AND (exp dislocations OR dislocate$.mp OR dislocation$.mp) AND (exp emergency treatment OR exp treatment failure OR exp treatment outcome OR treatment$.mp) AND maximally sensitive RCT filter LIMIT to human and English.

**Search outcome**  
Seventy nine papers were found of which were 74 irrelevant and three of insufficient quality for inclusion. The remaining two papers are shown in table 4.

**Comment**  
There are a great number of single treatment case series in this area. Only one comparative series is randomised, and the surgical treatment is not standardised in either series. There is a suggestion that outcome may be different if there is a predisposition to dislocate but the evidence for this is very weak. Further work is required.

**Clinical bottom line**  
Conservative management of primary patellar dislocation is as effective as surgery and has a lower complication rate. It is the treatment of choice.

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Table 4

<table>
<thead>
<tr>
<th>Author, date, and country</th>
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<th>Study weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and Hughton, USA, 1988</td>
<td>103 primary patellar dislocations over 30 years</td>
<td>Retrospective cohort</td>
<td>Recurrence rate (more than 1 redislocation)</td>
<td>36.5% vs 23% vs 0</td>
<td>Retrospective non-randomised series over 30 years Very small numbers in some groups</td>
</tr>
<tr>
<td>Conservative treatment (74) v arthroscopy (13) alone v arthroscopy (16)</td>
<td></td>
<td></td>
<td>Recurrence rate (more than 1 redislocation)</td>
<td>Conservative 43% v 20%</td>
<td></td>
</tr>
<tr>
<td>Subanalysis predisposed to dislocate (69) v no predisposition (34)</td>
<td></td>
<td></td>
<td>congenital predisposition v none</td>
<td>Arthroscopy 0 v 11%</td>
<td>Arthroscopy 0 v 0</td>
</tr>
<tr>
<td>Nikku et al, Finland, 1997</td>
<td>125 patients with acute primary patellar dislocation</td>
<td>PRCT</td>
<td>Instability (redislocation or subluxation)</td>
<td>No significant difference</td>
<td>Randomised by year of birth Operations not standardised All patients had EUA and arthroscopy before randomisation</td>
</tr>
<tr>
<td>Conservative (55) v operative (70)</td>
<td></td>
<td></td>
<td>Patient opinion</td>
<td>No significant difference</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lysholm II score</td>
<td>No significant difference</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hughton VAS</td>
<td>No significant difference</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number of major complications</td>
<td>4 in operative group</td>
<td></td>
</tr>
</tbody>
</table>

EUA = examination under anaesthesia; PRCT = prospective randomised controlled trial.
Towards evidence based emergency medicine: best BETS from the Manchester Royal Infirmary. Oral or topical antibiotics for impetigo.

J McVicar

doi: 10.1136/emj.16.5.364

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