Home based and hospital based IV antibiotics for cellulitis had similar effects on clinical outcomes


What is the relative efficacy of home based compared with hospital based intravenous (IV) antibiotics for treatment of cellulitis?

**METHODS**

**Design:** randomised controlled trial.

**Allocation:** concealed.

**Blinding:** unblinded.

**Follow up period:** >4 weeks.

**Setting:** metropolitan Christchurch, New Zealand.

**Intervention:** all patients received a first IV dose of cephazolin, 2 g, before leaving the ED. 101 patients were allocated to home based treatment (continued IV cephazolin, 2 g, twice daily, administered by community care nurses, and daily visits from a general practitioner). 99 patients were allocated to hospital based treatment (admission to a hospital ward under the care of the on-call medical team who managed clinical treatment, including choice of ongoing IV antibiotic).

**Outcomes:** included days to no advancement of cellulitis, days on IV or oral antibiotics, days to hospital discharge or on home care, days on IV antibiotics, or days on oral antibiotics (table).

**Patient follow up:** 194 patients (97%) (mean age 52 y, 68% men) were followed up for >4 weeks.

**MAIN RESULTS**

The home based and hospital based care groups did not differ for days to no advancement of cellulitis, days to hospital discharge or on home care, days on IV antibiotics, or days on oral antibiotics (table). The groups did not differ for mean difference in SF-36 scores for physical functioning (-5.2, 95% CI -13.7 to 3.2) or pain (-3.8, CI -10.6 to 3.0) at day 6.

**CONCLUSION**

Home based and hospital based intravenous antibiotics for treatment of cellulitis did not differ for days to no advancement of cellulitis, days to discharge, days on IV or oral antibiotics, or physical functioning or pain.

**Home based v hospital based intravenous (IV) antibiotics for cellulitis**

<table>
<thead>
<tr>
<th>Outcomes at &gt;4 weeks</th>
<th>Hazard ratio (95% CI)*†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days to no advancement of cellulitis (n = 193)</td>
<td>0.99 (0.74 to 1.34)</td>
</tr>
<tr>
<td>Days to discharge (n = 193)</td>
<td>0.95 (0.71 to 1.26)</td>
</tr>
<tr>
<td>Days on IV antibiotics (n = 193)</td>
<td>0.85 (0.64 to 1.14)</td>
</tr>
<tr>
<td>Days on oral antibiotics (n = 194)</td>
<td>1.18 (0.88 to 1.59)</td>
</tr>
</tbody>
</table>

*CI defined in glossary.
†Hazard ratios >1 suggest that home based treatment was faster.

Analysis adjusted for age, sex, location of cellulitis (upper v lower limb), and previous antibiotic treatment.

**Commentary**

Management of acute cellulitis by IV antibiotics in primary healthcare settings has often been discussed as an option to alleviate unnecessary hospital admissions. However, until now, little evidence existed to support a change from inpatient management of cellulitis. The study by Corwin et al found similar levels of effectiveness for home based and hospital based treatment of cellulitis.

The study was pragmatic and well conducted. Interestingly, home care patients received only cephazolin, whereas patients treated in hospital were prescribed any antibiotic as determined by clinical preference. Arguably, this suggests that protocol guided drug choice is as effective as that driven by the circumstances of individual cases. A minor quibble is that the extent of presenting cellulitis was marked using an indelible pen—an additional check of baseline comparability would have been to provide useful information for implementation.

Although the groups did not differ for satisfaction with care (96% v 96%), more patients in the home based group than in the hospital based group were satisfied with the location of care (93% v 66%, p<0.001). Such information supports a move towards further development of home based services. The potential for a greater number of patients to be treated in the community by a nurse led service could be explored in further investigations into the development of treatment guidelines in conjunction with medical support.

Anita Latta, RN
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