Bell's palsy and prednisolone
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Search checked by Paul Wallman, Specialist Registrar

Clinical scenario
A 35 year old man presents to the emergency department with a one day history of a right sided facial weakness. Examination reveals a complete right facial nerve palsy, without any evidence of herpes zoster, middle ear disease, trauma, or further neurology. A diagnosis of idiopathic (Bell's) facial nerve palsy is made. You wonder whether early high dose steroids would improve his prognosis or speed of recovery.

Three part question
In [an adult with Bell's palsy] would [early steroid therapy] improve [time to recovery and outcome]?

Search strategy
Medline 1966 to 7/99 using the OVID interface. (exp facial paralysis OR facial palsy OR bells palsy.mp) AND (exp steroids OR steroid$.mp) AND (maximally sensitive RCT filter) LIMIT to human AND english.

Search outcome
Altogether 72 papers were found of which 65 were irrelevant and three of insufficient quality for inclusion. The remaining four papers are shown in table 3.

Comment
No studies have demonstrated a benefit in starting steroids in those with incomplete facial paralysis as they have a good prognosis. In addition, no studies have demonstrated an improvement in the time to recovery in any patients with Bell's palsy. If any benefit has been shown, then it is in those with a complete facial paralysis with steroids being started early. There are significant criticisms with all the studies conducted so far, and a large prospective randomised controlled trial demonstrating a clear benefit has yet to be conducted.

Clinical bottom line
Current evidence does not support the early use of high dose steroids in idiopathic incomplete facial nerve palsy. In patients with complete paralysis early steroids may be of benefit.

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>May et al, 1976, USA¹</td>
<td>51 patients</td>
<td>PRCT</td>
<td>Visual assessment of motor recovery</td>
<td>No difference</td>
<td>Small study</td>
</tr>
<tr>
<td>Wolf et al, 1978, USA¹</td>
<td>239 patients</td>
<td>PRCT</td>
<td>Electromyography</td>
<td>No difference</td>
<td>Not blinded</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Facial strength</td>
<td>No difference</td>
<td>Control group not treated with placebo</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Autonomic dysfunction</td>
<td>No difference</td>
<td>Only 30% of patients had complete denervation, and 20% had mild Bell’s palsy on entry into the trial</td>
</tr>
<tr>
<td>Austin et al, 1993, USA¹</td>
<td>107 patients</td>
<td>PRCT</td>
<td>Functional nerve testing</td>
<td>Significant improvement in facial nerve function</td>
<td>Small study</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Time to recovery</td>
<td>No difference</td>
<td>29% lost to follow up after randomisation</td>
</tr>
<tr>
<td>Shafshak et al, 1994, Egypt¹</td>
<td>160 patients with complete facial palsy</td>
<td>Clinical trial</td>
<td>Facial nerve excitability</td>
<td>Significantly better recovery with steroids, especially if given &lt;24 hours after onset</td>
<td>Not randomised</td>
</tr>
</tbody>
</table>

PRCT = prospective randomised controlled trial.
Towards evidence based emergency medicine: best BETs from the Manchester Royal Infirmary. Bell's palsy and prednisolone.
J Desmond and P Wallman

doi: 10.1136/emj.16.6.445

Updated information and services can be found at:
http://emj.bmj.com/content/16/6/445.citation

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