**Prednisolone or valacyclovir for Bell palsy‡**

<table>
<thead>
<tr>
<th>Comparisons</th>
<th>Complete recovery§</th>
<th>At 12 mo R(t 95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prednisolone vs no prednisolone</td>
<td>72% vs 57%</td>
<td>26% (14 to 39)</td>
<td>7 (5 to 13)</td>
</tr>
<tr>
<td>Valacyclovir vs no valacyclovir</td>
<td>66% vs 64%</td>
<td>3% (−7 to 14)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Prednisolone + placebo vs valacyclovir + placebo</td>
<td>70% vs 57%</td>
<td>23% (6 to 42)</td>
<td>8 (5 to 27)</td>
</tr>
</tbody>
</table>

‡Abbreviations defined in Glossary. RBI, NNT, and CI calculated from data in article. §Complete recovery = 100 on the Sunnybrook scale assessing facial function.

**CONCLUSION**

Prednisolone, but not valacyclovir, reduced time to complete recovery of facial-nerve function in patients with Bell palsy.

*See Glossary.

†Information provided by author.

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**COMMENTARY**

Bell palsy is an acute, unilateral, peripheral, facial nerve paralysis in which inflammation of the nerve and compression within the temporal bone are believed to play a role. Possible causes include autoimmune processes, demyelination, and infection, particularly herpes simplex virus. Complete recovery of facial-nerve function is seen in 70% to 85% of patients (1). In 2004, 2 Cochrane reviews were published: One pooled the results of 4 corticosteroid studies (2), and the other included 3 antiviral studies (3). Neither found sufficient evidence to support the treatments. A recent RCT that included more patients (n = 496) than the 2 reviews combined showed that prednisolone improved recovery at 3 (83%) and 9 months (94%); acyclovir did not (71% and 85%, respectively) (4).

The RCT by Engström and colleagues, which compared corticosteroids and antiviral therapy, is larger and used valacyclovir, which has higher bioavailability than acyclovir. Although complete recovery rates were slightly lower than in the smaller trial, they also found that prednisolone (plus placebo) was the only effective agent. The small differences in the results of the 2 studies can be attributed to differences in interventions, analytic methods, populations, and facial nerve function grading systems. The smaller trial used the House-Brackmann scale to assess facial-nerve function, whereas Engström and colleagues used the Sunnybrook scale to increase sensitivity.

Engström and colleagues showed that corticosteroids are effective for Bell palsy, but antiviral therapy is not. This adds to growing evidence that prompt corticosteroid therapy is beneficial and antiviral therapy is not beneficial in the routine treatment of Bell palsy and provides an evidence base for practice patterns.

**REFERENCES**


**Review: Perioperative β-blockers provide no clear benefit in patients having noncardiac surgery**


**QUESTION**

In patients having noncardiac surgery, does perioperative use of β-blockers prevent short-term cardiovascular (CV) events?
REVIEW SCOPE

Included studies compared a β-blocker given in the perioperative period with another drug, placebo, or no intervention in patients, with or without CV disease, having noncardiac surgery. Outcomes were 30-day all-cause mortality, CV mortality, nonfatal myocardial infarction (MI), nonfatal stroke, myocardial ischemia, heart failure, and perioperative adverse events.

REVIEW METHODS

PubMed, EMBASE/Excerpta Medica, and Cochrane Library (1966 to May 2008); and references were searched for randomized controlled trials (RCTs). 33 trials (n = 12,306, mean age 33 to 75 y) met the selection criteria. 16 RCTs reported adequate allocation concealment; 29 RCTs were placebo-controlled; and 19 RCTs reported blinding of patients, clinicians, and outcome assessors. 13 trials were considered to be at low risk for bias and 20 at high risk for bias. 1 trial (with low risk for bias) contributed 68% of patients.

MAIN RESULTS

β-blocker therapy reduced risk for nonfatal MI and myocardial ischemia and increased risk for stroke (Table). It increased risk for perioperative bradycardia and hypotension but not bronchospasm. The estimate of treatment effect for some outcomes was influenced by trial quality (risk for bias), use of up-titration of β-blockers to achieve a target heart rate, mean heart rate achieved on β-blockers (≤ 75 vs > 75 bpm), and proportion of patients with bradycardia (< 10% vs ≥ 10%) but not by patient risk status.

<table>
<thead>
<tr>
<th>β-blockers vs other drugs, placebo, or no treatment (control) in patients having noncardiac surgery*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Nonfatal MI</td>
</tr>
<tr>
<td>Myocardial ischemia</td>
</tr>
<tr>
<td>All-cause mortality</td>
</tr>
<tr>
<td>Cardiovascular mortality</td>
</tr>
<tr>
<td>Nonfatal stroke</td>
</tr>
<tr>
<td>Heart failure</td>
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</tbody>
</table>

*MI = myocardial infarction; other abbreviations defined in Glossary. Weighted event rates, RRR, RRI, NNT, NNH, and CI calculated from data in article using the Peto method.

CONCLUSION

In patients having noncardiac surgery, perioperative use of β-blockers provides no clear benefit in preventing short-term cardiovascular events.

Source of funding: No external funding.
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COMMENTARY

The review by Bangalore and colleagues is the latest and most comprehensive attempt to explore the role of perioperative β-blockade in preventing adverse events in patients having noncardiac surgery.

Despite the review’s overall sound methodology, several concerns must be addressed. First, the authors’ selected outcomes of interest may have been too narrow because 36 of 73 trials were excluded for failing to report these outcomes. Second, the validity of the pooled results is affected by the considerable degree of clinical heterogeneity among the included trials. Patient characteristics, β-blocker used, dose administered, timing and route of administration, and duration of use all varied widely across trials. Sensitivity analyses were done to explore the effects of this heterogeneity, but the authors admitted that this exercise was only hypothesis-generating.

Large, sufficiently powered RCTs are required to clarify the efficacy of perioperative β-blockade in specific patient populations. In the high-surgical-risk subgroup, patients who had β-blockade showed a 63% reduction in the odds of all-cause mortality and a 44% reduction in the odds of nonfatal MI. The combined sample size of these trials was too small to allow definitive conclusions regarding this subgroup, pointing to the need for further research.

Approximately 80% of deaths, MIs, and strokes in the Bangalore review came from the PeriOperative ISchemic Evaluation (POISE) trial (1). The relatively high dose of metoprolol used in this trial may have caused a spuriously high rate of hypotension and fatal events. However, the increased risk for β-blockade–related stroke seems to be consistent regardless of whether POISE is included in the metaanalysis. Excluding patients with a history of cerebrovascular disease would not entirely ameliorate this risk because such patients comprised only 21% of stroke patients in the POISE trial.

The review by Bangalore and colleagues calls into question the efficacy of perioperative β-blockade for noncardiac surgery. Further research is required to clarify whether any patient groups benefit from this therapy.
**Review: Enhanced oral hygiene prevents respiratory infection in older persons in hospitals and nursing homes**

**Sjögren P, Nilsson E, Forsell M, Johansson O, Hoogstraate J.**


**QUESTION**

In older persons in hospitals and nursing homes, does enhanced oral hygiene prevent respiratory infection?

**REVIEW SCOPE**

Included studies evaluated the effect of enhanced oral hygiene care or frequent professional oral care on respiratory infection in older persons in hospitals or nursing homes. Outcomes were respiratory infection, pneumonia, and death from pneumonia.

**REVIEW METHODS**

MEDLINE, Cochrane Central Register of Controlled Trials, and National Health Service Economic Evaluation Database (1996 to Nov 2007); and reference lists were searched for randomized controlled trials (RCTs) published in English, German, Dutch, or a Nordic language between 1996 and 2007. Studies involving patients with mechanical ventilation or tube-feeding were excluded. 3 RCTs (n = 807) met the selection criteria.

1 placebo-controlled trial was double-blinded. An additional crossover trial (n = 46) of uncertain randomization status did not provide useful data.

**MAIN RESULTS**

Meta-analysis was not done because of differences in interventions and outcomes. The Table shows the results of individual trials.

**CONCLUSION**

In older persons in hospitals and nursing homes, enhanced oral hygiene prevents respiratory infection and death from pneumonia.

**Source of funding: No external funding.**

**Enhanced oral hygiene vs placebo or usual care (control) to prevent respiratory infection in older persons in hospitals and nursing homes***

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Type of patients (n)</th>
<th>Follow-up</th>
<th>Outcomes</th>
<th>Intervention</th>
<th>Control</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre- and post-operative oral rinse with chlorhexidine</td>
<td>Patients having heart surgery (353)</td>
<td>To discharge</td>
<td>Respiratory infection</td>
<td>2.9%</td>
<td>9.4%</td>
<td>69% (27 to 88)</td>
<td>16 (9 to 61)</td>
</tr>
<tr>
<td>Oral care by caregiver after every meal and weekly professional oral care</td>
<td>Nursing home residents (360)</td>
<td>2 y</td>
<td>Pneumonia</td>
<td>11%</td>
<td>19%</td>
<td>39% (5 to 63)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Weekly professional oral care</td>
<td>Nursing home residents (80)</td>
<td>2 y</td>
<td>Death from pneumonia</td>
<td>7.6%</td>
<td>16%</td>
<td>54% (17 to 75)</td>
<td>12 (7 to 46)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in Glossary. RRR, NNT, and CI calculated from data in article.

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**COMMENTARY**

The review by Sjögren and colleagues was technically well done. Although a potential conflict of interest exists in that 4 of the 5 authors and the sponsorship of the review are from a dental care company, the findings agree with those of a previous, more extensive review, published in a dentistry specialty journal (1).