Bell's palsy: new evidence provides a definitive drug therapy strategy

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ADDRESS FOR CORRESPONDENCE

Leone Ridsdale
King's College London, Unit of Neurology and General Practice, Department of Clinical Neuroscience, PO 41, Institute of Psychiatry, Camberwell, London, SE5 8AF, UK.
E-mail: Leone.Ridsdale@iop.kcl.ac.uk

Bell's palsy:
new evidence provides a definitive drug therapy strategy

Bell's palsy is acute, idiopathic, unilateral paralysis of the facial nerve[1] and most GPs will see a new case about once every 5 years. Although most patients recover well, up to 30% have a poor outcome, with persistent facial weakness, psychological difficulties, and facial pain. The rapid, often painful onset of facial weakness is distressing for patients, leading them to present urgently to their GP. Primary care management has included various options, such as prednisolone and/or antiviral drugs, or neither, but evidence for these or other strategies has been weak or absent. This persisting uncertainty about ideal management can be disconcerting for GPs and their patients.

In 2001, the American Academy of Neurology published guidelines on the management of Bell's palsy, concluding that, while the benefit of steroids and/or aciclovir had not been established, the available evidence indicated that steroids were 'probably effective', and that aciclovir combined with prednisolone was 'possibly effective'.[1] Subsequently, two articles published in the *British Medical Journal* triggered controversy when they recommended the early use of steroids and aciclovir,[2,3] although no further reliable data had been published since the American guideline. After decades of little persuasive evidence, four randomised controlled trials, involving over 1800 patients, have recently been published, and their results allow much more robust conclusions regarding drug treatment of Bell's palsy.[4–7]

Steroids definitely improve outcome, based on the results of two large primary care based trials which addressed this question. The Scottish Bell's palsy trial[4] included 551 patients recruited from primary care, and showed that 83% of patients treated with prednisolone within 72 hours of onset (50 mg/day for 10 days) had recovered compared to 63.6% who received placebo at 3 months (number needed to treat [NNT] = 6) and this result remained significant at 9 months (NNT = 8). The recent Swedish trial[5] involving 839 patients confirmed this, with 72% of the steroid group (10 days of prednisolone starting at 60 mg/day for 5 days, then reduced by 10 mg/day, started within 72 hours of onset) who achieved full recovery at 12 months versus 57% in the control group.

Antiviral drugs do not improve outcome. The Scottish trial used aciclovir 2000 mg/day for 10 days, and led to no improvement in recovery either in addition to, or instead of, prednisolone. Two Japanese hospital based trials[6,7] compared prednisolone alone (starting dose 60 mg/day) with prednisolone plus valaciclovir (a pro-drug of aciclovir). One study (150 patients recruited) reported a negative result (valaciclovir offered no advantage over prednisolone alone).[6] The second study (296 recruited) reported a positive outcome,[7] but this result was compromised by a number of serious methodological flaws, including an inadequate randomisation procedure, single blind design, and a 25% drop out rate (not included in the analyses).[8]

Following the publication of these three trials in 2007,[4,6,7] some commentators still recommended the use valaciclovir for those with severe facial weakness,[9,10] despite the evidence of lack of effectiveness. Most recently, the Swedish study[5] has hopefully put the matter beyond doubt, with no evidence that valaciclovir was effective in the management of Bell's palsy.[11]

Yet some may still be tempted to recommend antiviral treatment. Their rationale is driven by the suspicion that many cases may be due to reactivation of herpes simplex virus (HSV), although this aetiological hypothesis has never been

proven. It is also suggested that varicella zoster reactivation leading to facial palsy without rash (*zoster sine herpete*) may account for a proportion of Bell's palsy. Serological studies were carried out in the two Japanese studies and revealed evidence of varicella zoster reactivation in 23/296 (8%)[7] and 28/150 (19%).[6] The latter study also measured HSV serology which indicated reactivation in 29/150 (19%).[6]

Antiviral enthusiasts suggest that because the dose of aciclovir used in the Scottish trial[4] was insufficient to treat varicella zoster and because patients were not tested serologically, unwitting inclusion of varicella zoster patients may have biased the study, producing an erroneous negative result. However, this argument is insufficient to explain the lack of effect seen in the Swedish study,[5] as the dose of valaciclovir (3000 mg/day for 7 days) was sufficient to treat varicella zoster as well as HSV (serology was not performed). The concern regarding varicella zoster reactivation has led to the suggestion that viral serology should be obtained at the outset of management, and the selection of treatment be guided by the results. We do not regard this as being feasible, at least within UK primary care, nor is it evidence based.

In summary, we may now draw some robust, evidence-based conclusions regarding treatment of patients with Bell's palsy (see Box 1). Although the outcome for most patients with Bell's palsy without treatment is good, steroids within 72 hours of onset significantly improve the proportion of those recovering fully,[4,5] and should be offered to all appropriate patients. Prednisolone 50 mg/day for 10 days is effective,[4] and perhaps more straightforward for patients and prescribers than 60 mg for 5 days, then reducing by 10 mg/day over the next 5 days;[5] neither regime led to unacceptable adverse effects. There is no evidence to recommend the use of steroids beyond the 72-hour time window at present. Antiviral drugs should not be used routinely on the basis of current evidence, and the failure of their effectiveness must lead us to question the notion that Bell's palsy is due to viral reactivation in most cases. Finally, we should remember that no matter how seductive an aetiological theory might appear, firm evidence of successful treatment is required before accepting it and recommending widespread use of drug therapy. The results of these recent trials allow GPs to approach the management of this distressing condition with confidence.

Box 1. Key evidence-based messages.

- All patients presenting with Bell's palsy within 72 hours of onset should be considered for treatment with a short course of steroids.
- Antiviral therapy does not improve outcome beyond steroids alone.

Richard J Davenport,
Consultant Neurologist, University of Edinburgh, UK.

Brian McKinstry,
Reader, Centre of Population Health Sciences: General Practice Section, University of Edinburgh, UK

Jillian M Morrison,
Professor of General Practice, University of Glasgow, UK.

Blair H Smith,
Professor of Primary Care Medicine, University of Aberdeen, UK.

Iain RC Swan,
Senior Lecturer in Otolaryngology, University of Glasgow, UK.

Frank Sullivan,
Director Scottish School of Primary Care, University of Dundee, UK.

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ADDRESS FOR CORRESPONDENCE

RJ Davenport
Department of Clinical Neurosciences, Western General Hospital, Edinburgh EH4 2XU
E-mail: rjd@skull.dcn.ed.ac.uk