Modafinil for fatigue in multiple sclerosis

E Willoughby

Single daily dose of modafinil is of benefit

Fatigue is a perplexing and at times incapacitating symptom in multiple sclerosis. It has both physical and cognitive components and its severity is not closely related to the extent of neurological disability, nor to clinical or laboratory measures of inflammatory activity, nor to depression. 1,2 Treatment is unsatisfactory, with few controlled studies and with interpretation of results hindered by somewhat blunt clinical scales to measure effects. Evidence is accumulating that fatigue in multiple sclerosis is due to dysfunction of the CNS,3,4 but lack of understanding of the underlying pathophysiology makes a rational approach to treatment difficult. The paper by Rammohan et al 5 (this issue, pp 179–183) is a useful addition to the limited literature on the subject. It demonstrates improvement in fatigue in patients with multiple sclerosis taking 200 mg modafinil a day.

Modafinil stimulates wakefulness and, compared with amphetamines, has a more selective action in the brain and fewer side effects. It is an α-1 adrenergic agonist with complex actions also on other neurotransmitter systems. A relatively long half life makes single daily dosing practicable. Interest in its effect on fatigue was stimulated by a study showing effectiveness in reducing daytime sleepiness in narcolepsy—at the same time measures of fatigue were improved. There is clearly overlap between fatigue and sleepiness, but in many patients the symptoms can be distinguished reasonably well.

Limitations of the present report in patients with multiple sclerosis are the single blind design, a standard dose titration sequence for modafinil and placebo and, especially, the short time on active treatment. Although 200 mg modafinil a day was of benefit, a higher dose of 400 mg was not. Increased side effects on the higher dose is more likely explanation than loss of responsiveness to the treatment after 2 weeks. It was noted that some patients did better on the higher dose, and it would be expected that there may be considerable variation among patients in the doses producing both side effects and improvement in symptoms.

Further studies on modafinil for fatigue in multiple sclerosis are warranted, with the need for a double blind study assessing treatment for longer periods, with titration of the dose for individual patients. Potential for habituation with modafinil seems relatively low but needs careful assessment.

J Neurol Neurosurg Psychiatry 2002;72:150

REFERENCES

EDITORIAL COMMENTARY

Powell et al* acknowledge that they could only evaluate the overall framework for delivering rehabilitation rather than its specific components. They have offered important new evidence to support the wider development of community based multidisciplinary rehabilitation teams. Wilson* has reminded us that it is wasteful spending hours delivering unevaluated therapy that may be of little or no benefit to a patient. The challenge now is to find evidence based ways of determining more precisely what these teams should actually do, when, and for how long.

Competing interests: none declared

J Neurol Neurosurg Psychiatry 2002;72:150–151

Author’s affiliation
R Hardie, Department of Neurology, St George’s and Atkinson Morley’s Hospitals, London, UK and Wolfson Neurorehabilitation Centre, London, UK; Richard.Hardie@ccmail.stgh-tr.sthames.nhs.uk

REFERENCES

CT after head injury

Which CT features help predict outcome after head injury?

D J Wyper

Presence of subarachnoid blood and overall appearance are helpful

In the paper by Wardlaw et al (this issue, pp 188–192) it is shown that the presence of subarachnoid blood and “overall appearance” of a CT scan could be added to the already established variables of age, Glasgow coma score, and pupil reaction to improve prediction of 1 year survival after head injury. This has been a thorough investigation and should be of practical benefit in improving the predictive model. A deficiency, which is recognised by the authors, is that the interrater variability in classifying the overall appearance of scans has still to be established. It remains to be seen whether or not this classification proves to be sufficiently robust for day to day application within increasingly busy neuroradiology departments.

Although this paper has focused on CT, MRI may be a better imaging modality for prognostic estimation, especially on account of its ability to detect brain stem lesions. If the current constraints around access for patients with acute head injury at the time of admission can be tackled then there could be a gradual shift towards MRI.

It is also clear that more subtle outcome measures are difficult to predict. Neuropsychiatric status after mild head injury has been investigated1 and variables including CT failed to predict outcome.

J Neurol Neurosurg Psychiatry 2002;72:151

Author’s affiliation
D J Wyper, Department of Clinical Physics, South Glasgow University Hospitals NHS Trust, Glasgow, UK

REFERENCES

Data supplements

Limited space in printed journals means that interesting data and other material are often edited out of articles; however, limitless cyberspace means that we can include this information online.

Look out for additional tables, references, illustrations.

www.jnnp.com

www.jnnp.com
Community based rehabilitation

R Hardie

J Neurol Neurosurg Psychiatry 2002 72: 150-151
doi: 10.1136/jnnp.72.2.150-a

Updated information and services can be found at:
http://jnnp.bmj.com/content/72/2/150.2

These include:

References
This article cites 1 articles, 1 of which you can access for free at:
http://jnnp.bmj.com/content/72/2/150.2#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections

    Injury (478)
    Neurological injury (390)
    Trauma (479)
    Trauma CNS / PNS (390)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/