Pharmaceutical Interventions for Emotionalism After Stroke

Maree L. Hackett, PhD; Michelle Yang, MPH; Craig S. Anderson, PhD, FRACP, FAFPHM; Judith A. Horrocks, MPhil; Allan House, DM, MRCP, MRCPsych

Disturbances of emotional behavior such as difficulty controlling crying or laughing are common after stroke. The essential feature of emotionalism is an increase in emotional behavior that the patient reports as being outside normal control, which occurs in situations that previously would not have provoked such behavior. In most cases, the disorder is mild and transient, but when severe, it may cause distress and embarrassment to the patient and their friends and family, leading to the avoidance of social contact and reduced quality of life. This is an update of a Cochrane Review we first published in 2004 to determine the effectiveness of pharmacological interventions, compared with placebo, for treating emotionalism after stroke.

Search Strategy
We searched the trials registers of the Cochrane Stroke Group (last searched by the Stroke Review Group Coordinator in August 2009) and the Cochrane Depression Anxiety and Neurosis Group (last searched August 2009). In addition, we searched the Cochrane Central Register of Controlled Trials (The Cochrane Library, Issue 3, 2009), MEDLINE (1966 to May 2008), EMBASE (1980 to May 2008), CINAHL (1982 to May 2008), PsycINFO (1967 to May 2008), and other databases. We also searched reference lists, clinical trials registers, conference proceedings, and dissertation abstracts and contacted authors, researchers, and pharmaceutical companies.

Selection Criteria
We considered for inclusion all relevant randomized controlled trials or quasi-randomized controlled trials in patients with a clinical diagnosis of stroke, in which a pharmaceutical agent used specifically for the treatment of emotionalism was compared with placebo.

Results
We identified 7 trials with 239 participants at entry. Data were available for 5 trials with 213 participants. Five trials showed large effects of treatment: 50% reduction in emotionalism, diminished tearfulness (OR, 9.35; 95% CI, 4.26 to 20.54), and improvement (reduction) in scores on the Pathological Laughter and Crying Scale. However, CIs were wide for 3 trials indicating that treatment may have had only a small positive effect or even a small negative effect (in 1 trial). Only 2 studies systematically reported adverse events; no discernible differences were seen between groups.

Discussion
The addition of 2 new trials since 2004 has confirmed previous findings, which indicate that antidepressants reduce the frequency and severity of crying episodes. However, there is continued uncertainty about who might benefit the most from treatment among those who meet the clinical features indicative of emotionalism. There are no data to guide recommendations about how long patients should remain on treatment or what rate of side effects may be expected. Under these circumstances, the current evidence indicates that it would be reasonable to use antidepressants in a therapeutic trial in the individual patient with persistent emotionalism that is sufficiently frequent and severe to warrant taking the known overall risks of prescribing antidepressants in the elderly.

Although these findings appear straightforward, our conclusions remain guarded by several methodological deficiencies in the studies, including the type of participants (the index stroke in these trials varied from 6 days to 13 years before randomization), the definition and diagnosis of emotionalism used (a widely agreed definition is not available), the inclusion of some comorbidities (emotionalism is known to be confounded by depression yet those with depression are included), and the generally poor trial design (small trials, short treatment duration) and reporting of results.

Acknowledgments
The 2004 published review was supported by a grant from the Stroke Society of Australasia with additional financial assistance provided.

Received April 12, 2010; accepted April 19, 2010.
From the Department of Neurological and Mental Health (M.L.H., M.Y., C.S.A.), The George Institute for International Health, Sydney, Australia; Psychiatry and Behavioural Sciences in Relation to Medicine (J.A.H.), University of Leeds, Leeds, UK; and the Leeds Institute of Health Sciences (A.H.), University of Leeds, Leeds, UK.
Correspondence to Maree L. Hackett, PhD, The George Institute for International Health, PO Box M201, Missenden Road, Sydney, NSW 2050, Australia. E-mail mhackett@george.org.au
(Stroke. 2010;41:e460-e461.)
© 2010 American Heart Association, Inc.

Stroke is available at http://stroke.ahajournals.org DOI: 10.1161/STROKEAHA.110.587311

e460
by the Academic Unit of Psychiatry, the University of Leeds, and the Department of Clinical Neurosciences, the University of Edinburgh. We thank the Cochrane Stroke Group, particularly Brenda Thomas, for searching the Cochrane Stroke Register and assistance with developing the search strategies. We also thank Hazel Fraser for assistance throughout the review process.

**Disclosures**

During the completion of this work, M.L.H. was in receipt of a National Health and Medical Research Council Public Health (Australia) Fellowship (2006 to 2009) and C.S.A. was a recipient of a National Health and Medical Research Council Research Fellowship (2008 to 2012).

**References**


**Key Words:** behavior ■ psychiatry