

es, a growing number of primary care physicians are choosing to refer their patients to hospitalists, and this number may continue to increase; whether this is in the patients' best interests is not known.

We share Bing's view that optimal communication among the clinicians caring for patients

is crucial. Primary care physicians and hospitalists should work together to improve care coordination and communication.

Mary Beth Hamel, M.D., M.P.H.
Jeffrey M. Drazen, M.D.
Arnold M. Epstein, M.D.

Medical Evaluation before Electroconvulsive Therapy

TO THE EDITOR: Tess and Smetana (April 2 issue)¹ do not include neuroimaging in their routine evaluation of patients before electroconvulsive therapy (ECT). However, in areas where the parasite is endemic, silent, undetected neurocysticercosis is a good reason for mandatory neuroimaging before ECT. In Brazil, with the use of computed tomography (CT), magnetic resonance imaging, or both, we prospectively evaluated 91 consecutive psychiatric outpatients who were candidates for ECT. We identified hidden neurocysticercosis in six patients (7%). We detected active, multiple cystic neurocysticercosis in one patient; inactive, multiple neurocysticercosis in two patients; and a single lesion of probable inactive neurocysticercosis in three patients. Active forms of this infection may produce mass effects, and inactive lesions can produce ectopic cerebral activity,² interfering with seizure threshold. Both types of lesions can lead to unpredictable risks during ECT. The most frequent parasitosis affecting the brain, neurocysticercosis is endemic in many poor areas, including China and India, and also in specific populations within developed countries, particularly among migrants and travelers. Psychiatrists may be unaware of the relevance of this condition. Neurocysticercosis is a great imitator, and in endemic areas it should be considered in the psychiatric differential diagnosis,³ including that of depressive disorders.⁴

Almir R. Tavares, Jr., M.D., Ph.D.

Universidade Federal de Minas Gerais
30130-100 Belo Horizonte, Brazil
almirtav@medicina.ufmg.br

Fernando M. Volpe, M.D., Ph.D.

Fundação Hospitalar do Estado de Minas Gerais
30130-100 Belo Horizonte, Brazil

1. Tess AV, Smetana GW. Medical evaluation of patients undergoing electroconvulsive therapy. *N Engl J Med* 2009;360:1437-44.

2. Nash TE, Pretell EJ, Lescano AG, et al. Perilesional brain edema and seizure activity in patients with calcified neurocysticercosis: a prospective cohort and nested case-control study. *Lancet Neurol* 2008;7:1099-105.

3. Tavares AR Jr. Psychiatric disorders in neurocysticercosis. *Br J Psychiatry* 1993;163:839.

4. Forlenza OV, Filho AH, Nobrega JP, et al. Psychiatric manifestations of neurocysticercosis: a study of 38 patients from a neurology clinic in Brazil. *J Neurol Neurosurg Psychiatry* 1997;62:612-6.

TO THE EDITOR: In their review on medical evaluation of patients undergoing ECT, Tess and Smetana recommend that the use of short-acting intravenous beta-blockers be reserved for patients at high risk for cardiovascular complications. This recommendation is not supported by the available evidence. During a seizure, an intense sympathetic discharge is transmitted directly to the cardiovascular system via the spinal sympathetic tract, causing tachycardia, hypertension, and conduction abnormalities.¹ This sympathetic discharge can cause catastrophic complications if not managed properly.² Both esmolol and labetalol can reduce or eliminate tachycardia, hypertension, ectopy, and ST-segment depression during ECT.³ Since there is no evidence that beta-blockers reduce the effectiveness of ECT, and there is clear evidence that they reduce cardiovascular stress during the treatment, beta-blockade should be administered to all patients undergoing ECT, with the exception of young, healthy persons who are normotensive and known to have normal cardiovascular reserve and patients with specific contraindications to beta-blockade.

Charles A. Welch, M.D.

Massachusetts General Hospital
Boston, MA 02114
cwelch1@partners.org

1. Welch CA, Drop LJ. Cardiovascular effects of ECT. *Convuls Ther* 1989;5:35-43.

2. Steiner LA, Drop LJ, Castelli I, Alfille PH, Schouten R, Welch CA. Diagnosis of myocardial injury by real-time recording of ST segments of the electrocardiogram in a patient receiving general anesthesia for electroconvulsive therapy. *Anesthesiology* 1993; 79:383-8.
3. Castelli I, Steiner LA, Kaufman MA, et al. Comparative effects of esmolol and labetalol to attenuate hyperdynamic states after electroconvulsive therapy. *Anesth Analg* 1995;80:557-61.

THE AUTHORS REPLY: We thank Tavares and Volpe for sharing an interesting facet of their practice. However, we are unaware of studies that demonstrate the impact of routine screening with head CT on patient outcomes — even in areas where neurocysticercosis is endemic. The finding of only one case of active neurocysticercosis among 91 patients in their high-prevalence area lends support to the use of targeted neuroimaging. In areas where the prevalence of silent, space-occupying intracranial lesions is low, routine head CT before ECT is not justified given the low yield of actionable disease. We do agree that medical consultants should be aware of all settings where the risk of an intracranial lesion is increased. We thank our colleagues from Brazil for highlighting travel to or emigration from endemic areas as potentially important considerations.

We appreciate Welch's comment regarding the use of beta-blockers; this is a controversial area in the care of patients with ECT. In our article, we described the significant hemodynamic changes associated with ECT and the efficacy of beta-blocker therapy in blunting this response. However, despite Welch's description of a poor outcome, most patients tolerate these changes without

a major event. The vast majority of patients, including those in whom cardiac complications do develop, are able to complete a full course of treatment with no long-term cardiac sequelae (Table 2 of our article). The beneficial effect of the routine use of prophylactic beta-blockers in patients is therefore difficult to demonstrate overall. The potential risks of beta-blocker use are a shortened duration of seizures and reduced efficacy of ECT, though we acknowledge that these are not uniform findings in the literature.¹⁻³ We stand by our recommendation that prophylactic beta-blockers be used only for selected high-risk patients with either previous prolonged hypertension after ECT or a preexisting condition that requires tight hemodynamic control. If future data show no effect of beta-blockers on seizure duration and ECT efficacy, the risk-benefit calculation would change in favor of less selective use.

Anjala V. Tess, M.D.

Gerald Smetana, M.D.

Beth Israel Deaconess Medical Center
Boston, MA 02215
atess@bidmc.harvard.edu

1. Howie MB, Black HA, Zvara D, McSweeney TD, Martin DJ, Coffman JA. Esmolol reduces autonomic hypersensitivity and length of seizures induced by electroconvulsive therapy. *Anesth Analg* 1990;71:384-8.
2. van den Broek WW, Leentjens AF, Mulder PG, Kusuma A, Bruijn JA. Low-dose esmolol bolus reduces seizure duration during electroconvulsive therapy: a double-blind, placebo-controlled study. *Br J Anaesth* 1999;83:271-4.
3. Howie MB, Hiestand DC, Zvara DA, Kim PY, McSweeney TD, Coffman JA. Defining the dose range for esmolol used in electroconvulsive therapy hemodynamic attenuation. *Anesth Analg* 1992;75:805-10.

Ethical and Scientific Implications of the Globalization of Clinical Research

TO THE EDITOR: In their article, Glickman et al. (Feb. 19 issue)¹ examine the growing phenomenon of clinical trials being conducted outside the regulatory framework of the developed world. They rightfully point out some of the ethical and scientific pitfalls of these investigations. However, they do not mention that the offshoring of clinical studies can also deprive critically ill patients in the developed world access to some of the latest drugs and devices, the underlying basic research for which was paid for through taxes by

these same persons. Perhaps this issue, as opposed to paternalistic concerns about inadequate regulation within the Third World, represents the biggest ethical dilemma we confront in this era of research globalization.

John R. Adler, Jr., M.D.

Stanford University
Stanford, CA 94305
jra@stanford.edu

1. Glickman SW, McHutchison JG, Peterson ED, et al. Ethical and scientific implications of the globalization of clinical research. *N Engl J Med* 2009;360:816-23.