# Correspondence

#### **EDITED BY LOUISE HOWARD**

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## Transcranial magnetic stimulation

Sir: The timely article by Reid et al (1998) is both informative and thought-provoking; the authors raise a number of issues which may have far-reaching implications beyond the treatment of depression. As Reid et al are quick to point out, transcranial magnetic stimulation (TMS) has already established its usefulness in a number of clinical and research areas, including brain-mapping research and pre-operative neurological assessment.

In addition to its exciting research potential and existing clinical uses, TMS may also find a role in the treatment of a variety of neurological and neuropsychiatric conditions, for example Parkinson's disease (particularly where there is concurrent speech deficit, as occurs in more than half of these patients). Sandyk (1997) describes the case of a 52-year-old patient with a four-year history of Parkinson's disease complicated by speech impairment (mainly severe stuttering predominantly during 'on-off' periods); a "dramatic and consistent improvement in speech" occurred following regular TMS treatment. Another area of investigation is the efficacy of TMS in combination with serotonergic agents, which may have a synergistic effect (Belmaker et al, 1997) with implications again for movement disorders (notwithstanding the motor component of psychoses).

Another issue raised by the growing use of TMS is its safety. Complications of its clinical use are considered in detail elsewhere (Shajahan & Ebmeier, 1988) and Reid et al emphasise the potential of TMS for inducing seizures. However, what is not discussed is the possibility that TMS-provoked seizures may have a therapeutic benefit, as they apparently do in conventional electroconvulsive therapy (ECT). Of course, this would have implications for anaesthesia and muscle relaxants, again affecting patient acceptability. Presumably the primary advantage of TMS over ECT

lies less in its efficacy and more in its tolerability. If this is the case, the greater acceptability of TMS will doubtless have an effect in the arena of public opinion. The popular notion of unmodified 'fitting' in the 1950s made ECT a public pariah for decades, culminating in a public demonstration against ECT outside the Royal College of Psychiatrists in August 1998. In contrast, the apparent sophistication of TMS in conscious and cooperating patients may prove advantageous to the public perception of psychiatry.

Belmaker, R. H., Grisaru, N., Ben-shahar, D., et al (1997) The effects of TMS on animal models of depression, beta-adrenergic receptors, and brain monoamines. CNS Spectrums. 2, 26–30.

Reid, P. D., Shajahan, P. M., Glabus, M. F., et al (1998) Transcranial magnetic stimulation in depression. *British* Journal of Psychiatry. 173, 449–452.

Sandyk, R. (1997) Speech impairment in Parkinson's disease is improved by transcranial application of electromagnetic fields. International Journal of Neuroscience, 92, 163–172.

Shajahan, P. M. & Ebmeler, K. P. (1998) Transcranial magnetic stimulation: a treatment of the future? Progress in Neurology and Psychiatry, 2, 19–22.

**B. Moore** Royal Liverpool University Hospital, Liverpool, Merseyside L69 3BX

## **Definitions of schizophrenia**

Sir: While we applaud the design and presentation of the results of the study by Mason et al (1997) comparing the predictive validity of various definitions of schizophrenia, we take exception to the conclusion drawn by the authors that the ICD-10 (World Health Organization, 1992) definition of schizophrenia "probably represents the most clinically useful definition for first-episode studies" because it combines both high sensitivity (92.73%) and high specificity (88.64%). This might be true when the ICD-10 definition is compared with the DSM-III-R (American Psychiatric Association, 1994) definition in

isolation, but it ignores the clinical reality of the situation. The DSM classification of schizophrenia recognises that the relative importance of sensitivity and specificity depends on the clinical context. Because of the dire consequence of being given a misdiagnosis of schizophrenia, the DSM definition of schizophrenia has been devised with a very low tolerance for false positives, which is borne out by the study's finding of no false positives in the sample (using 13-year diagnostic stability as the gold standard). However, for the purposes of case-finding, first-episode studies of schizophrenia invariably use a combined definition; that is, a case would be included for study if the criteria are met for either schizophreniform disorder or schizophrenia, which in this study would result in a combined sensitivity of 94.12% (superior to the ICD-10 definition). This result, coupled with the superior predictive validity of the DSM-III-R, would seem to argue for a different conclusion - that the DSM-III-R definition performs the best. Given the inclusion of negative symptoms into the DSM-IV definition of schizophrenia, one would expect the sensitivity of the DSM-IV definition to be even better.

American Psychiatric Association (1994) Diagnostic and Statistical Manual of Mental Disorders (4th edn) (DSM-IV). Washington, DC: APA.

Mason, P., Harrison, G., Croudace, T., et al (1997)
The predictive validity of a diagnosis of schizophrenia. A report from the International Study of Schizophrenia (ISoS) coordinated by the World Health Organization and the Department of Psychiatry, University of Nottingham. British journal of Psychiatry, 170, 321–327.

World Health Organization (1992) The Tenth Revision of the International Classification of Diseases and Related Health Problems (ICD-I0). Geneva: WHO.

M. B. First New York State Psychiatric Institute, 1051 Riverside Drive, Unit 60, New York, NY 10032, USA

H. A. Pincus Office of Research, American Psychiatric Association, I400 K Street NW, Washington, DC 20005, USA

#### Satisfied with dissatisfaction?

**Sir:** Leese *et al* (1998) report similar user satisfaction, as indicated by the Verona Service Satisfaction Scale (VSSS; Ruggeri & Dall'Agnola), between an intensive and a standard community mental health service. They conclude that both services were reasonably successful with fairly high levels of satisfaction. We would question such an optimistic interpretation.