- 5 Shibasaki H, Sadato N, Lyshkow H, et al. Both primary motor cortex and supplementary motor area play an important role in complex finger movement. *Brain* 1993;116:1387-98.
- 6 Gibb WRG, Luthert PJ, Marsden CD. Corticobasal degeneration. *Brain* 1989;112:1171-92.
- 7 Riley DE, Lang AE, Lewis A, et al. Corticobasal ganglionic degeneration. *Neurology* 1990;40:1203-12.

Leiguarda et al reply:

We appreciate Okuda and Tachibana's comments about our paper on apraxia in corticobasal degeneration¹ because they enable us to clarify the status of limb-kinetic apraxia, a point which is particularly relevant for the clinical interpretation of the apractic disorders in patients with corticobasal degeneration.

Limb or melokinetic apraxia (originally called "innervatory apraxia" by Kleist²) was considered by Liepmann to be a form of limb apraxia due to the loss of "kinaesthetic-innervatory engrams" secondary to "sensorimotor" damage.³ The disorder is characterised by clumsiness in the performance of fine motor acts by the hand contralateral to the hemispheric damage. All types of movements including gestures, regardless of whether the patient creates or imitates them, become "uncouth, clumsy, inexpert, and preceded by fruitless attempts which only bring the wrong muscles into play."⁴

The status of limb-kinetic apraxia has been debated⁵ for over three decades. Most authors have refused to consider symptoms connected with limb-kinetic apraxia as apractic.⁶ Geschwind disregarded it completely⁷ and Rothi et al failed to include limb-kinetic apraxia in their neuropsychological model of limb praxis.⁸ Brain concluded that it is simply a partial symptom of pyramidal tract lesion,⁹ a view also shared by Ajuriaguerra and Tissot,¹⁰ Hecaen and Rondot,⁶ and Mesulam.¹¹ De Renzi in particular contends that "limb-kinetic apraxia has never been described with sufficient accuracy to be distinguishable from a mild form of paresis and to gain acceptance by neurologists."¹² In support, monkeys with lesions restricted to the corticospinal tract show similar errors.¹³

This may be an extreme view of limb-kinetic apraxia. Liepmann's definition of apraxia may be summarised as a deficit in the performance of purposeful skilled movements, in the absence of elementary motor (weakness, akinesia, abnormal posture, or tone) or sensory deficits, or of impaired comprehension or memory.³ The disruption of movement seen in lesions of the corticospinal pathway, or as seen in Parkinson's disease, can seldom be fully explained by weakness, akinesia, abnormal posture, or tone. There is additional breakdown of the movement pattern or formula—Liepmann's innervatory engram—that suggests a higher motor disorder or apraxia. This is exactly what is seen to a pronounced degree in corticobasal degeneration, particularly in the initially affected limb. To this extent we agree with Okuda and Tachibana.

We deliberately employed standardised tests for ideomotor and ideational apraxia, however, and concentrated on the less affected limb. We did not explore the contentious topic of limb-kinetic apraxia, because it is such an uncertain area.

Nevertheless, we agree that patients with corticobasal degeneration characteristically exhibit a higher order motor deficit in their more affected limb, which we would be happy to call limb-kinetic apraxia if others would allow the term! Our study also shows that many patients with corticobasal degeneration likewise fail tests for ideomotor apraxia, a failure that we do not think can be explained by limb-kinetic apraxia alone.

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- 1 Leiguarda R, Lees AJ, Merello M, Starkstein S, Marsden CD. The nature of apraxia in corticobasal degeneration. *J Neurol Neurosurg Psychiatry* 1994;57:455-9.
- 2 Kleist K. Kortikale (innervatorische). Apraxie. *Jahrbuch für Psychiatrie und Neurologie* 1907;28:46-112.
- 3 Liepmann H. Apraxie. *Ergebnis gesamte Medizin* 1920;1:516-43.
- 4 Fagioli P, Basso A. Historical perspectives on neuroanatomical correlates of limb apraxia. In Roy EA, Ed. *Neuropsychological studies of apraxia and related disorders*. Amsterdam: North-Holland, 1985:3-44.
- 5 Okuda B, Tachibana H, Kawabata K, Takeda M, Sugita M. Slowly progressive limb-kinetic apraxia with a decrease in unilateral cerebral blood flow. *Acta Neurol Scand* 1992;86:76-81.
- 6 Hecaen H, Rondot P. Apraxia as a disorder of a system of signs. In Roy EA, Ed. *Neuropsychological studies of apraxia and related disorders*. Amsterdam: North-Holland, 1985:75-98.
- 7 Geschwind N. The apraxias: neural mechanism of disorders of learned movement. *American Scientist* 1976;63:188-195.
- 8 Rothi LJG, Ochipa C, Heilman KM. A cognitive neuropsychological model of limb praxis. *Cognitive neuropsychology* 1991;8:443-58.
- 9 Brain R. Speech disorders. London: Butterworths, 1965.
- 10 Ajuriaguerra J, Tissot R. The apraxias. In: Vinken PJ, Bruyn GW, eds. *Handbook of clinical neurology*. Vol 4. Amsterdam: North Holland, 1969:48-66.
- 11 Mesulam MM. *Principles of behavioral neurology*. Philadelphia: FA Davis Co, 1985.
- 12 De Renzi E. Apraxia. In: Boller F, Grafman J, eds. *Handbook of neuropsychology*. Vol 2. Amsterdam: Elsevier Science Publishers, 1989:245-63.
- 13 Laurence DG, Kuypers HGJM. The functional organization of the motor system in the monkey. I the effects of bilateral pyramidal lesions. *Brain* 1968;91:1-14.

Transient epileptic amnesia—a clinical update and a reformulation

In relation to the interesting article by Kapur¹ on transient epileptic amnesia, I would like to remind your readers of some of the published work related to such findings. Thus experimental studies, using either intracarotid sodium amytobarbitone or electrical stimulation for diagnostic purposes on epileptic patients, have shown associations between the temporal lobe of the hemisphere dominant for speech and both memory and consciousness.^{2,3} It is important to keep this in mind when discussing the anatomical and pathophysiological basis of amnesic phenomena, transient or otherwise.

EA SERAFETINIDES

- 1 Kapur N. Transient epileptic amnesia: a clinical update and a reformulation. *J Neurol Neurosurg Psychiatry* 1993;56:1184-90.
- 2 Serafetinides EA, Hoare RD, Driver MV. Intracarotid sodium amytobarbitone and cerebral dominance for speech and consciousness. *Brain* 1965;88:107-30.
- 3 Serafetinides EA, Walter RD, Cherlow DG. Amnesic confusional phenomena, hippocampal stimulation and laterality factors. In: Isaacson RL, Pribram KH, eds. *The Hippocampus* Vol 2. New York: Plenum Press, 1975:363-75.

NOTICE

The winter meeting of the **British Neuropsychiatric Association** will take place in the Conference Theatre London Zoo, on 20 January 1995. The subject will be *the neuropsychiatry of vascular disease*. For further information please contact Sue Garrett, Administrative Assistant BNPA, 17 Clocktower Mews, London N1 7VU, UK. Telephone/fax 071-226 5949.

BOOK REVIEWS

All titles reviewed here are available from the BMJ Bookshop, PO Box 295, London WC1H 9TE. Prices include postage in the United Kingdom and for members of the British Forces Overseas, but overseas customers should add £2 per item for postage and packing. Payment can be made by cheque in sterling drawn on a United Kingdom bank, or by credit card (Mastercard, Visa or American Express) stating card number, expiry date, and your full name.

Manual of Psychiatric Emergencies (third edition). Edited by STEVEN E HYMAN and GEORGE E TESAR. Publisher: Churchill Livingstone, Edinburgh 1993. (Pp 354; £21.95.) ISBN 316387282.

When the Editor sent this little book to me for review my first response was "Oh dear, another psychiatric vade-mecum". Other texts about psychiatric emergencies suggest that authors often have difficulty finding enough to say about psychiatric emergencies, with the result that what emerges is a short textbook of psychiatry rather than a text more precisely focused upon emergencies. That can only be done from the perspective of a casualty officer. That is exactly what these authors have achieved by compiling the views of some thirty contributors most of whom, one suspects, have had significant experience of being on-call in a busy modern general hospital.

The initial section is a series of contributions providing practical and explicit guidance about the assessment of different presenting problems; The Emergency Psychiatric Evaluation, with special emphasis upon neuropsychiatric evaluation, Crisis, The Suicidal Patient, the Violent Patient, Acute Grief and Disaster Victims, Families