Letters

seems unlikely in retrospect that the drug played any significant role in the symptomatic improvement. A more likely explanation is that the improvement occurred coincidentally, particularly as the patient did not deteriorate again after stopping the drug. Experimentally destruction of 20% of the subthalamic nucleus produces hemiballismus, which may be reduced by further lesions in the internal segment of the globus pallidus;¹² in this case it is possible that extension of the tumour to involve these areas lead to resolution of his symptoms. That the tumour was progressively increasing in size is confirmed by the development of signs suggesting progressive involvement of the internal capsule.

Carcinoma of the bronchus commonly metastasises to the brain; it is surprising therefore that spread to the basal ganglia should be reported so infrequently.

A RUDD,
JG MCKENZIE,
PH MILLARD,

Departments of Geriatric Medicine,
and Histopathology,
St Georges Hospital, Blackshaw Road,
London SW17 0RE, UK

References

- ¹ Meyers R, Sweeny DB, Schwidde JT. Hemiballismus: Aetiology and surgical treatment. *J Neurol Neurosurg Psychiatry* 1950;13:115-26.

Fig 2 Macroscopic appearances of tumour at necropsy

- ² Kase CS, Maulsby GO, deJuan E, Mohr JP. Hemichorea-hemiballismus and lacunar infarction in the basal ganglia. *Neurology* 1981;31:452-5.
- ³ Saris S. Chorea caused by caudate infarction. *Arch Neurol* 1983;40:590-1.
- ⁴ Martin JP, Alcock NS. Hemichorea associated with lesions of corpus luyii. *Brain* 1934;57:504-16.
- ⁵ Bucy PC. *The Precentral Motor Cortex*. University Illinois Press, 1944: 361, 404.
- ⁶ Burke L, Berenberg RA, Kim KS. Choreoballismus: A nonhemorrhagic complication of venous angiomas. *Surg Neurol* 1984;21:245-8.
- ⁷ Diamond MS, Huang YP, Yahr MD. Sudden onset of involuntary movement disorders with arteriovenous malformations of the basal ganglia. *Mt Sinai J Med (NY)* 1982;49:438-42.
- ⁸ Lobo-Antunes J, Yahr MD, Hilal SK. Extra-pyramidal dysfunction with cerebral arteriovenous malformations. *J Neurol Neurosurg Psychiatry* 1974;37:259-68.
- ⁹ Bremme H. Ein Beitrag zur Bindearmchorea. *Monatschr. Psychiatr Neurol* 1919;45:107-21.
- ¹⁰ Bonhoeffer K. Ein Beitrag zur Localisation der choreatischen Bewegungen. *Monatschr. Psychiatr. Neurol.* 1897;1:6-41.
- ¹¹ Legre J, Paillas JE, Dufour M, Alliez B, Debaene A. Tumeurs des noyaux grise centraux: Etude neuro-radiologique avec verification anatomique. *Acta Radiol Diag* 1972;13:135-49.
- ¹² Carpenter MB, Whittier JR, Mettler FA. Analysis of choreoid hyperkinesia in the rhesus monkey. *J Comp Neurol* 1950;92:293-332.

Accepted 3 February 1986.

Book reviews

Psychopharmacology and Food. (*British Association for Psychopharmacology Monograph No 7*). Edited by Merton Sandler and Trevor Silverstone. (Pp 185; £20.00.) Oxford: Oxford University Press, 1985.

How many clinicians consider the effects of the drugs they prescribe on dietary intake? Perhaps even fewer consider the effects of dietary factors on the functioning of the body itself. Some of the answers can be found in this volume which are the proceedings of a Symposium held by the British Association for Psychopharmacology in December 1983.

The book contains excellent basic science chapters by Edmund Rolls dealing with the neurophysiology of feeding and by Steven Cooper covering neuropeptides and food

and water intake. These contributions are accompanied by other chapters dealing with the psychopharmacology of anorectic drugs and their clinical use and the drug treatment of anorexia and bulimia. Trevor Silverstone covers the effects of psychotropic drugs on appetite and body weight.

From the other viewpoint, Gerald Cruzon provides an example of dietary regulation of brain 5HT function by tryptophan. Merton Sandler and colleagues consider the effects of dietary factors in the initiation of migraine attacks.

The book is well prepared and contains much of interest to clinicians and basic scientists. It is a shame that it has taken almost two years from the time of the Symposium to the publication of the proceedings. Such a delay must affect the impact a volume of this nature has in terms of the scientific contribution and the willingness of individuals to purchase it.

P JENNER

Functional Mapping of the Brain in Vascular Disorders. Edited by Wolf-Dieter Heiss. (Pp 130; DM56.00.) Heidelberg: Springer-Verlag, 1985.

This nice booklet deals with those tomographic scanning techniques which measure regional brain function, particularly in relation to patients with ischaemic brain disease. Visualisation of functional measurements in an anatomical setting is described as "functional mapping" in the title of the book. The difficulties connected with making functional measurements, which are based on all sorts of dynamic processes, from an "image" are addressed in the first chapter by Ter-Pogossian who compares magnetic resonance imaging (MRI) and positron emission tomography (PET) techniques. This is an excellent chapter, clearly written, and I think fully accessible to the non-expert, describing the strengths and limitations of both techniques. MRI is

clearly an imaging technique which can display structures exquisitely, both in health and disease. Obviously this makes MRI very useful for medical practice, which relies heavily on structural changes for making a diagnosis. PET on the other hand, measures the capacity of brain tissue to handle certain tracer compounds and calculates from that a specified function. To look for visual contrast between one and another region (which is implied in "imaging") is not the first aim of this method. PET will remain for the foreseeable future a clinical research technique because of the limited number of available PET centres, but may also ultimately (according to Ter-Pogossian) have a further reaching effect on medicine than MRI imaging.

Research results are presented in a further six chapters, two concerned with MRI imaging and four using PET. All the authors are leading specialists in their fields and the material is presented expertly and usually in much detail. Inevitably the balance between the several chapters is not ideal. For instance chapter 2, supposed to deal with phosphorus-31 magnetic resonance imaging, does not really belong in the book as it deals with spectroscopy in rats only and concentrates on the description of many technical details more or less indicating that imaging of P-31 is still a long way off.

The third chapter deals with MRI imaging of sodium-23 by Hilal and co-workers. This fascinating technique is clearly described (the text was previously published in a journal elsewhere).

However, the authors betray their background by stressing "image contrast" more than the possible functional implications of being able to determine regional brain sodium content. Also it is not made clear how this technique could be exploited to investigate ischaemic brain disease.

The bulk of the data at present available about "functional mapping" of human brain in relation to cerebrovascular disease is contained within the last four chapters, presenting the viewpoints of four different PET groups. Jones of the London group summarises the advantages of the method using continuous inhalation of gaseous tracers labelled with oxygen-15, allowing regional measurements of oxygen utilisation combined with cerebral blood flow. Clearly combination of tracers for perfusion measurements and determination of actual energy metabolism has been very fruitful in studying pathophysiology of ischaemic lesions. Pawlik and colleagues from the Cologne group describe thoroughly, diffuse and focal changes of glucose metabolism in

a large group of patients with several types of ischaemic lesions. The remote effects of an ischaemic lesion on other parts of the brain are presented admirably and in great detail. Yamamoto and colleagues from the Montreal group concentrate on combining measurements of regional blood flow, oxygen metabolism, glucose utilisation and pH. The abundance of data seems difficult to put together for the reader who is not familiar with the topic. The authors succeed in proposing patterns of functional abnormalities in ischaemic disease, although many questions remain; such as those concerning the validity of the method of intracellular pH measurements. The specific difficulties inherent to PET studies of relating a range of varying functional values in a number of brain regions to a clinical condition expressed by a multitude of variable signs and symptoms, are beautifully demonstrated by this study and courageously dealt with.

The last chapter by Syrota of the Paris group is an excellent review of the methodological problems of measuring regional brain pH using PET. This chapter demonstrates nicely how much quantitation of specific functions lies at the basis of PET measurements while images come second. In fact no image is used (or needed) in that paper. The author also combines blood flow, oxygen metabolism and pH measurements and suggests interesting explanations for the finding of local alkalosis in subacute cerebral infarction. As a bonus a summary of brain protein synthesis measurements by PET is given, although no mention is made how to use this in the study of cerebrovascular disease.

For whom is this book intended? It will give the neurologist who has a special interest in brain pathophysiology of cerebrovascular disorders a good overview of the present state of the art (particularly as far as PET is concerned), although considerable effort will have to be directed in studying methodological and technical aspects. This circumstance will probably make the book less suitable for the general clinical neurologist.

KL LEENDERS

Anxiety. By DW Goodwin. (Pp 234; £12.50.) Oxford/New York: Oxford University Press, 1986.

Professor Goodwin is a born storyteller and this book is a detective story about anxiety. It sets the scene by defining the subject and

putting it in historical perspective; describes the main characters with the help of spicy quotations from Kierkegaard, Pathol, William James, Sigmund Freud and Erica Jong, and then takes us on a path through treatment to find a solution.

The book is written at rare pace and verve. "Hooray for anxiety" writes Goodwin on the second page and from then on we gallop, *molto-vivace* through the physiology and psychology of anxiety, the pharmacology of anti-anxiety drugs and descriptions of the different anxiety disorders. An appendix includes a set of notes and references that make almost better reading than the rest of the text. Here we read that a recent American President used to dictate to his secretary whilst seated on a commode, that a patient in the United States has recently been awarded \$250,000 in a malpractice case because of delay in being treated with antidepressants, and that French psychiatrists have a lower opinion of the American Classification (DSM II) than those in other countries.

The story is a good read and if the solution to anxiety is not found by the end of the book it hardly matters. The lay reader brought into contact with the latest work on anxiety in the most digestible way and, like all good detective stories, once begun the book is difficult to put down. Nevertheless, we have major reservations about the degree of oversimplification that is necessary to make this book suitable to the average reader. One has to cut corners to make easy reading and headings such as "The Brain Makes Morphine" and "PET: Seeing Thoughts" go too far. The book is also far too uncritical to be a good text for psychiatrists in training. Although the author rightly criticises DSM III as being based on an arbitrary "list of diagnostic criteria suggesting a certainty and consensus that do not exist" he nonetheless follows this by a series of chapters which appear to give uncritical acceptance of the new classification. Wolpe's outdated concept of reciprocal inhibition as the mechanism of action of desensitisation in phobias is repeated and a statement of the WHO that benzodiazepines were being significantly abused is dismissed as it was "based more on hunch than on data".

It is difficult to write well for the general public on any specialised subject and it is easy to criticise those who make the attempt. Professor Goodwin has almost succeeded and if his book goes to a second edition I hope he will be able to remove the intellectual sloppiness that mars its merit.

PETER TYRER