



## Mesodiencephalic targeting of stimulating electrodes in patients with tremor caused by multiple sclerosis

I R Whittle, Y H Yau and J Hooper

*J. Neurol. Neurosurg. Psychiatry* 2004;75;1210

---

Updated information and services can be found at:

<http://jnp.bmj.com/cgi/content/full/75/8/1210>

---

*These include:*

### References

This article cites 5 articles, 2 of which can be accessed free at:

<http://jnp.bmj.com/cgi/content/full/75/8/1210#BIBL>

### Rapid responses

You can respond to this article at:

<http://jnp.bmj.com/cgi/eletter-submit/75/8/1210>

### Email alerting service

Receive free email alerts when new articles cite this article - sign up in the box at the top right corner of the article

---

### Notes

---

To order reprints of this article go to:

<http://journals.bmj.com/cgi/reprintform>

To subscribe to *Journal of Neurology, Neurosurgery, and Psychiatry* go to:

<http://journals.bmj.com/subscriptions/>

# PostScript

## CORRESPONDENCE

### Transition from paediatric to adult neurological services

Drs Tuffrey and Pearce are timely in their comments about the importance of structured transition to adult orientated services for young people with chronic neurological disease.<sup>1</sup> We agree that this is a significant problem, and that proper transition (including pretransition planning, transition planning at the appropriate time and multidisciplinary working) must be achieved to maximise the young person's integration into society. There is abundant evidence that those lost to follow up present later with treatable complications of their conditions.<sup>2</sup> It is also known that health status and psychosocial factors have a proved impact on the social participation of young disabled adults.<sup>3</sup>

There are a number of well established and well researched models of multidisciplinary team care for young adults in transition with disabling conditions including neurological conditions, such as cerebral palsy, spinal bifida, and muscular dystrophy. The consultant in rehabilitation medicine is well used to working with multidisciplinary teams, in a manner analogous to the paediatrician. An evaluation of a team approach versus ad hoc health services for young people with physical disabilities, in six areas of the UK, which was published in *The Lancet* in 2002,<sup>4</sup> demonstrated that participation in society was increased threefold for no additional financial cost where organised transition services were involved, compared with non-coordinated care.

A team has been in place in Leeds for 14 years. It includes professionals including physiotherapists, occupational therapists, clinical psychologists, and speech and language therapists, and sessions of general practitioner health promotion and family planning. The needs of the population served by this team are wider than traditional medical care, and liaison with social services and education authorities is essential. Issues of access to employment and training, occupation of leisure time, relationships, sexuality, and independence are routinely addressed.

Consultants in rehabilitation medicine have the diagnostic and management skills necessary to coordinate the health care of these individuals.<sup>5</sup> They liaise with other medical and surgical specialties, including orthopaedics, urology, gastroenterology, respiratory medicine, and neurology. Their training allows them to identify and treat many of the well recognised health problems, including secondary musculoskeletal complications, pain, spasticity, and urological as well as neurological problems. They analyse gait and posture, and prescribe orthoses and special seating. They also prescribe assistive technology. Their paradigm of treatment is not restricted to disease per se, but addresses the whole spectrum of impairment, activity (disability), and handicap (participation).

Tuffrey and Pearce are right to point out that the survival of disabled children into adulthood is a challenge to the existing organisation of adult health services. It is

our duty to maintain good standards of medical and health care and to enable such individuals to lead as fulfilled a life as possible. The evidence for the value of coordinated transition services for individuals with disabling condition exists and should be widely applied.

**R M Kent, M A Chamberlain**

School of Medicine, Rheumatology & Rehabilitation Research Unit, University of Leeds, Leeds, UK

Correspondence to: Dr R M Kent;  
r.m.kent@leeds.ac.uk

### References

- 1 Tuffrey C, Pearce A. Transition from paediatric to adult medical services for young people with chronic neurological problems. *J Neurol Neurosurg Psychiatry* 2003;74:1014–15.
- 2 Bax MC, Smyth DP, Thomas AP. Health care of physically handicapped young adults. *BMJ Clin Res Ed* 1988;296:1153–5.
- 3 Bent N, Jones A, Malloy I, et al. Factors determining participation in young adults with a physical disability: a pilot study. *Clin Rehabil* 2001;15:552–61.
- 4 Bent N, Tennant A, Swift T, et al. Team approach versus ad hoc health services for young people with physical disabilities: a retrospective cohort study [comment]. *Lancet* 2002;360:1280–6.
- 5 Chamberlain MA. Advances in rehabilitation: an overview and an odyssey. *Clin Med* 2003;3:62–7.

### Authors' reply

We are grateful to Drs Kent and Chamberlain for their comments in response to our paper.<sup>1</sup> Young adult teams (YAT) are indeed an effective way to provide coordinated medical care for some young adults with neurological conditions. Unfortunately as Chamberlain and colleagues correctly point out in their paper,<sup>2</sup> this provision is currently only available in a few areas of the UK so for many young people referral to such a service is not an option. Although we do not dispute that rehabilitation physicians are skilled in dealing with many of the secondary complications of longstanding neurological conditions, young adults with additional moderate or severe learning difficulties may not be so well served.

Since YATs have been shown to enhance the quality of life of these young adults as well as being cost effective, it is essential that all areas of UK should be working towards providing similar services for all these young people. Paediatricians, physicians, and the various other professionals working with the different age groups can then work together to ensure that transition care pathways are developed and appropriately evaluated.

**C Tuffrey**

Paediatric Neurology, Department of Child Health, Southampton General Hospital, Southampton, UK

**A Pearce**

Community Child Health Department, North Bristol NHS Trust, Southmead Hospital, Bristol, UK

Correspondence to: Dr C Tuffrey; tuffrey@yahoo.co.uk

doi: 10.1136/jnnp.2003.033076

### References

- 1 Tuffrey C, Pearce A. Transition from paediatric to adult medical services for young people with chronic neurological problems. *J Neurol Neurosurg Psychiatry* 2003;74:1014–15.
- 2 Bent N, Tennant A, Swift T, et al. Team approach versus ad hoc health services for young people with physical disabilities: a retrospective cohort study. *Lancet* 2002;360:1280–6.

### Effect of a multidisciplinary clinic on survival in amyotrophic lateral sclerosis

We write in relation to the article from colleagues at Beaumont Hospital, Dublin, who report that patients with amyotrophic lateral sclerosis (ALS) attending a multidisciplinary clinic had a better prognosis owing to better medical care than those attending general neurology clinics.<sup>1</sup> In particular the survival of the bulbar onset patients was extended by 9.6 months if they attended the ALS clinic.

The inherent error in their conclusions relates to the manner in which the two populations compared were derived. Patients were recruited to the ALS clinic group up to one year after diagnosis; the general neurology clinic population was recruited immediately from the time of diagnosis. Patients who die from ALS within some months of the diagnosis are not available to the ALS clinic cohort but these are included in the general neurology clinic population. It is probable that patients living further from the ALS clinic and those who are more disabled by ALS attend their local neurologist. Thus the ALS clinic treated a group of fitter ALS patients, whereas the general neurologists saw all ALS patients regardless of medical, social, or economic factors. In their model the authors corrected for some factors predictive of a poor outcome in ALS which were all overrepresented in the general neurology clinic population (increased age, bulbar onset, and shorter duration of illness at presentation); they did not correct for a measure of baseline disease severity.

The effect of the recruitment bias can be seen in the survival graphs (figs 1–3) comparing the two populations. In the ALS clinic group there were no deaths in the bulbar onset group for 250 days, whereas in the general neurology ALS patients it seems that deaths occurred within 30 days (fig 2). It is difficult to be exact about the latter figures because no survival tables are given in the article. If the patients at risk (or the percentage alive) had been reported below the graphs, this would have been of use to the reader.<sup>2</sup> It is noteworthy that the subsequent rate of decline in survival of the two groups is exactly the same; the only differences between the groups in all the measures are the initial 100% survival in the ALS clinic group for about 200 days (whole group and riluzole subgroup) and 250 days (bulbar onset subgroup). The reason for this initial survival advantage is that in order to attend the ALS clinic one must be relatively well and not requiring immediate hospital care. As the authors indicate in their discussion, even the ability to attend the ALS clinic on one

occasion or one year after diagnosis conferred a significant survival advantage with a 25% reduction in mortality ( $p = 0.01$ ).

The survival advantage of the ALS clinic group thus appears to reflect the increased mortality of the patients treated by general neurologists in the first 200–250 days; these patients are not well enough to attend the ALS clinic.

Inferior treatment by general neurologists is implied (for example, “less attention was paid to early introduction of gastrostomy feeding”—for which no evidence was produced) and is suggested as the reason for the increased mortality.

We accept that a multidisciplinary clinic is valuable in the management of ALS, but this paper is not scientific evidence for this view. The paper would have been useful if the authors had matched ALS clinic and general neurology clinic patients, even retrospectively, for age at onset, mode of onset, disability, and duration of illness. Patients should have been deemed to have entered the ALS clinic cohort only from the date of first attendance at the ALS clinic and not from the date of diagnosis, which may have been up to one year previously. A treatment effect of the ALS clinic can only be possible from the date of first attendance. Censoring early deaths in the clearly more ill general neurology cohort should also have been considered. By avoiding these biases one might have a possible estimate of the effect of attendance at the ALS clinic.

**M Hutchinson**

St Vincent's University Hospital, Dublin 4, Republic of Ireland

**R Galvin, B Sweeney**

Cork University Hospital, Cork, Republic of Ireland

**T Lynch**

Mater Hospital, Dublin

**R Murphy**

Adelaide and Meath Hospital, Dublin

**J Redmond**

St James's Hospital, Dublin

Correspondence to: Prof M Hutchinson; mhutchin@iol.ie

## References

- 1 **Traynor BJ**, Alexander M, Corr B, *et al*. Effect of a multidisciplinary amyotrophic lateral sclerosis (ALS) clinic on survival: a population based study, 1996–2000. *J Neural Neurosurg Psychiatry* 2003;**74**:1258–61.
- 2 **Pocock SJ**, Clayton TC, Altman DG. Survival plots of time-to-event outcomes in clinical trials: good practice and pitfalls. *Lancet* 2002;**359**:1686–9.

## Author's reply

We welcome the opportunity to reply to the points raised by Hutchinson and his colleagues concerning our recent paper and to provide further scientific evidence that patients attending a multidisciplinary ALS clinic have improved survival compared with patients attending a general neurology clinic.

The key criticism is that the survival benefit derived from attending the ALS clinic is a result of referral centre bias. Hutchinson *et al* maintain that the multidisciplinary ALS clinic selects for patients with milder disease, as only these patients live long enough to be referred to the ALS clinic. While we acknowledge that it is challenging to avoid referral

bias when one is quantifying the effect of a referral centre, referral bias is not a prominent factor in our study, for the following reasons. First, survival analysis of patients diagnosed exclusively in the ALS clinic (that is, not referred from other neurologists) reveals a similar beneficial effect on mortality compared with the previously published data (median survival, 644 and 448 days for the ALS clinic ( $n = 44$ ) and general neurology cohorts, respectively; log-rank test,  $p = 0.02$ ); Second, ALS patients who live more than a year from the time of diagnosis (and therefore have ample opportunity for referral) continue to experience a survival advantage from attending the ALS clinic.

Hutchinson *et al* suggest that that the parallel nature of the survival curves (that is, the similar rate of decline of both cohorts) stems from the overrepresentation in the general neurology clinic of more disabled patients who die in the first 250 days and “are not well enough to attend the ALS clinic.” Consequently, the perceived difference in mortality is artefactual. In reality, the parallel nature of the survival curves provides the strongest proof of a robust improvement in survival along ALS patients attending the ALS clinic: survival curves would converge rather than remain parallel, if the improved survival observed in the ALS cohort reflected the early loss of sicker patients in the general neurology clinic cohort. Kaplan–Meier survival analysis demands that the death of each individual be an independent event. Therefore, the prognosis of an individual who dies two years after diagnosis is unrelated to that of all other ALS patients who die within the first 250 days of diagnosis. The vast majority of positive intervention studies in both ALS patients and transgenic ALS mouse models show a parallel pattern of survival curves, as is seen in our paper. This common finding is thought to reflect the ability of an intervention to slow down, but not reverse, the progression of motor neurone degeneration that underlies ALS.

A single visit to the ALS clinic is associated with an improved survival of the ALS patient. The term “ALS clinic” is a misnomer. In fact, it represents a system of care that “services the Irish ALS population by combining the existing infrastructure of community services and the services of a voluntary organisation with a hospital based system.”<sup>1</sup> The primary advantage of all “multidisciplinary clinics” is the coordination of a network of hospital and community based ancillary services (including respiratory medicine, nursing, occupational and physical therapy, speech and swallowing, nutrition, home help, counselling, and so on) that facilitate symptomatic interventions for each ALS patient, both in a hospital setting and in their home.<sup>2</sup> Therefore, any patient who attends the clinic on a single occasion is enrolled in this system and is assiduously followed up. When a patient becomes too ill to travel to the clinic, home visits are undertaken by a specialist ALS nurse who coordinates and integrates community based, hospital based, and, in the latter stages, hospice based care. The improved survival observed in patients who attend the clinic on one occasion is thus a testimony to the “ALS clinic” system and contradicts the assertion that the observed difference in survival arises from the exclusion of ALS patients who are not fit enough to travel.

In our opinion, the criticism of the use of Kaplan–Meier survival curves rather than

tables to present survival data is not valid. The vast majority of modern peer reviewed journals, including *JNNP*, do not publish survival tables, as the graphic representation of survival curves provides a greater wealth of data.

Similarly, if the baseline characteristics of patients attending the multidisciplinary clinic are solely responsible for our findings, attendance at the ALS clinic would not be independently predictive of survival in the Cox proportional hazards model. The Cox proportional hazards model is a popular mathematical model that allows estimation of hazard ratios and survival curves, *even though the baseline hazard is not specified*. Furthermore, it has been established that the site of onset, age, sex, and delay in diagnosis are surrogate markers of ALS disability.

The purpose of our study was to determine the optimum method of providing care to ALS patients. We agree that a randomly assigned study in which age, sex, site of onset, and disability are matched for each cohort would be ideal to demonstrate a difference between two different clinic types. However, this could only be accomplished in the setting of a formal randomised clinical trial, which would be both logistically difficult and ethically questionable.

**B J Traynor**

Massachusetts General Hospital-East, Charlestown, MA, USA

**O Hardiman**

Beaumont Hospital, Dublin

## References

- 1 **Traynor BJ**, Alexander M, Corr B, *et al*. Effect of a multidisciplinary amyotrophic lateral sclerosis (ALS) clinic on ALS survival: a population based study, 1996–2000. *J Neural Neurosurg Psychiatry* 2003;**74**:1258–61.
- 2 **Leigh PN**, Abrahams S, Al-Chalabi A, *et al*. The management of motor neurone disease. *J Neural Neurosurg Psychiatry* 2003;**74**(suppl IV): iv32–47.

## Outcome of contemporary surgery for chronic subdural haematoma: evidence based review

We read with interest the report by Weigel *et al*<sup>1</sup> on the outcome of contemporary surgery for chronic subdural haematoma, and commend the authors for attempting to review such an extensive and diverse range of publications. The paper ably demonstrates the lack of quality evidence for the management of this common condition. However, we are concerned about the description of the paper as “evidence based”. Exclusion criteria were broad, and fewer than 5% of papers found in the Medline literature search were included in the final analysis. Correspondence with the original authors for further data or clarification is an acceptable and expected part of evidence based analysis, and would have increased paper and patient numbers significantly.<sup>2,3</sup> The data examined do not appear to have been paired, as age and comorbidity will have dramatic effects on outcome, irrespective of surgical technique. In this context, unpaired univariate statistical analysis is unable to produce meaningful significance. Further detracting factors include limited search procedures, absent

quality assessment and weightings of individual papers, exclusion of pre-morbid status in deciding success rates, and a burr hole diameter defined as up to 3 cm—classified by many neurosurgeons as a craniotomy. We are concerned that, on a less careful reading, this paper could serve as a reference in the realm of “evidence based medicine”, when it fails to adhere to most criteria of good evidence based medicine.

**A Brodbelt, P Warnke**

The Walton Centre for Neurology and Neurosurgery,  
Liverpool L9 7LJ, UK

Correspondence to: A Brodbelt;  
abrodbelt@doctors.org.uk

## REFERENCES

- 1 Weigel R, Schmiedek P, Krauss JK. Outcome of contemporary surgery for chronic subdural haematoma: evidence based review. *J Neurol Neurosurg Psychiatry* 2003;**74**:937–43.
- 2 Moher D, Cook DJ, Eastwood S, et al. Improving the quality of reports of meta-analyses of randomised controlled trials: the QUOROM statement. Quality of reporting of meta-analyses. *Lancet* 1999;**354**:1896–900.
- 3 Greenhalgh T. *How to read a paper*, 2nd ed. London: BMJ Books, 2001.

## Author's reply

We appreciate the comments by Brodbelt and Warnke on our recent evidence based review on the outcome of contemporary surgery for chronic subdural haematoma. We completely agree with them that one of the surprising findings of our review was that there is indeed a paucity of methodological good studies on the surgical management of one of the most common entities seen in neurosurgical clinical routine. As most studies we reviewed were retrospective and some relied solely on expert opinions, it was not possible to achieve our initial goal of carrying out a meta-analysis of the data. Nevertheless, it was possible to scrutinise the available data with the armamentarium of evidence based methodology. It is obvious, however, that the conclusions to be drawn depend on the primary data. The proposals of the quorum conference cited are concerned primarily with improving the quality of meta-analysis of randomised clinical trials.

Good clinical practice is not necessarily good evidence based medicine. There are many problems in the methodology of evidence based medicine itself, and the validity of its recommendations are increasingly being questioned. Finally, the key to understanding an article or a review is always the critical appraisal of reader themselves. This is no less important for meta-analyses or evidence based reviews. Even to the “less careful reading” it should be clear that our review provides an inventory of the current situation but that a critical analysis of the data does not allow one to go further and specify guidelines. We hope that our review will stimulate our colleagues to provide high quality evidence in the future. There are many questions to be answered.

**R Weigel, J K Krauss**

Department of Neurosurgery, University Hospital,  
Klinikum Mannheim, Germany

Correspondence to: J K Krauss; joachim.krauss@nch.ma.uni-heidelberg.de

## Mesodiencephalic targeting of stimulating electrodes in patients with tremor caused by multiple sclerosis

The review of deep brain stimulation (DBS) for tremor in patients with multiple sclerosis by Wishart and colleagues<sup>1</sup> was a good summary of the current literature, its shortcomings, and the problems associated with this type of surgery. We have recently published a report on the difficulties involved<sup>2</sup> and would like to add a comment about targeting the site of DBS implantation in the mesodiencephalon in this patient group.

An earlier review of stereotactic ablative and DBS surgery showed that a range of different thalamic subnuclei and mesodiencephalic areas has been targeted, with variable success.<sup>3</sup> Although a target in the thalamic nucleus ventrointermedius (Vim) is often cited, we have found—like Aziz's group<sup>4,5</sup>—that a more anterior and ventral electrode placement was most likely to reduce the tremor. In the 12 patients implanted in our series,<sup>6</sup> the median coordinates of the site of optimal intraoperative tremor suppression were 13.5 mm lateral to the midline, 2 mm behind the AC–PC (anterior commissural–posterior commissural) midpoint, and 2.5 mm deep to the AC–PC plane. These coordinates suggest a subthalamic–zona incerta target, which would interrupt the dentato–Vim projections. The deepest of the quadripolar electrodes was inserted at this site, suggesting that the remaining rostral electrodes straddle the Vim or nucleus ventro-oralis posterior, which lies anterior to the Vim.

Although our targets are not dissimilar to those reported by Aziz's group,<sup>4,5</sup> we have not done intraoperative microelectrode recordings or postoperative magnetic resonance imaging to confirm our intraoperative targeting. Furthermore, most patients with tremor caused by multiple sclerosis have major brain distortions because of demyelination, plaque formation, and ex vacuo hydrocephalus when they come to stereotactic surgery. It is difficult, therefore, to know how their mesodiencephalic anatomy conforms to a stereotactic atlas. This may explain why, in our experience, targeting in patients with multiple sclerosis is considerably more demanding than in patients with either Parkinson's disease or essential tremor.

**I R Whittle, Y H Yau, J Hooper**

Department of Clinical Neurosciences, Western  
General Hospital, Crewe Rd, Edinburgh EH4 2XU, UK

Correspondence to: Professor I R Whittle;  
irw@skull.dcn.ed.ac.uk

## References

- 1 Wishart HA, Roberts DW, Roth RM, et al. Chronic deep brain stimulation for the treatment of tremor of multiple sclerosis. *J Neurol Neurosurg Psychiatry* 2003;**74**:1392–7.
- 2 Hooper J, Whittle IR. Costs of thalamic deep brain stimulation for movement disorders in patients with multiple sclerosis. *Br J Neurosurg* 2003;**17**:40–5.
- 3 Haddow LJ, Mumford C, Whittle IR. Stereotactic treatment of tremor due to multiple sclerosis. *Neurosurg Q* 1997;**7**:23–34.
- 4 Alusi SH, Aziz TZ, Glickman S, et al. Stereotactic lesional surgery for the treatment of tremor in multiple sclerosis—a prospective case-controlled study. *Brain* 2001;**124**:1576–89.

5 Nandi D, Chir M, Liu X, et al. Electrophysiological confirmation of the zona incerta as a target for surgical treatment of disabling involuntary arm movements in multiple sclerosis: use of local field potentials. *J Clin Neurosci* 2002;**9**:64–8.

6 Hooper J, Taylor R, Pentland B, et al. A prospective study of thalamic deep brain stimulation for the treatment of movement disorders in multiple sclerosis. *Br J Neurosurg* 2002;**16**:102–9.

## Assessing tremor reduction and quality of life following thalamic deep brain stimulation for the treatment of tremor in multiple sclerosis

We read with interest the paper by Wishart et al.<sup>1</sup> on chronic deep brain stimulation (DBS) for the treatment of tremor in multiple sclerosis. We would like to highlight two important points.

First, reduction in tremor should not be the ultimate goal of this surgery. It is a means to an end. The most important outcome for the patient must be improved function. Surgery that reduces tremor but does not improve limb function (for example, residual ataxia) is of questionable benefit for the patient, although surgeons may mistake it as “successful” if they only assess tremor. The authors' review of the literature outlined many papers that focused on tremor but made no mention of function. In the authors' own series of four patients, improvements in tremor “translated into improvements in aspects of daily functioning” but no details were provided on how this was measured. We addressed this point in a recent paper dealing with thalamic DBS for 12 patients with multiple sclerosis and tremor but unfortunately this was not included in the authors' review.<sup>2</sup>

Second, the option of unilateral thalamic DBS in a patient with bilateral upper limb tremor should be discussed. We have found that, following DBS control of their dominant hand, some patients decide they do not need (or want) the other side done. If they have significant head tremor, however, bilateral surgery is required.<sup>3</sup>

**C Berk, J Carr, M Sinden, J Martzke, C R Honey**

Surgical Centre for Movement Disorders, Division of  
Neurosurgery, University of British Columbia,  
Vancouver, BC, Canada

Correspondence to: Dr C Berk;  
caglarberk@hotmail.com

## References

- 1 Wishart HA, Roberts DW, Roth RM, et al. Chronic deep brain stimulation for the treatment of tremor in multiple sclerosis: review and case reports. *J Neurol Neurosurg Psychiatry* 2003;**74**:1392–7.
- 2 Berk C, Carr J, Sinden M, et al. Thalamic deep brain stimulation for the treatment of tremor due to multiple sclerosis: a prospective study of tremor and quality of life. *J Neurosurg* 2002;**97**:815–20.
- 3 Berk C, Honey CR. Bilateral thalamic deep brain stimulation for the treatment of head tremor: report of two cases. *J Neurosurg* 2002;**96**:615–18.

## Author's reply

We value Dr Berk and colleagues' commentary and their input on the relevance of assessing limb function and its implications for quality of life. Our manuscript was written before their important contribution<sup>1</sup> appeared in our literature search, and we

regret that it was not included in our references. We targeted mainly English language outcome studies; an additional reference of note is that of Fernández-González and colleagues.<sup>2</sup>

**H A Wishart, D W Roberts, A J Saykin**

Neuropsychology Program and Brain Imaging Laboratory, Dartmouth Medical School/ DHMC, New Hampshire, USA

Correspondence to: Dr H Wishart; Heather.A.Wishart@Dartmouth.EDU

## References

- 1 Berk C, Carr J, Sinden M, et al. Thalamic deep brain stimulation for the treatment of tremor due to multiple sclerosis: a prospective study of tremor and quality of life. *J Neurosurg* 2002;**97**:815–20.
- 2 Fernández GF, Seijo F, Salvador C, et al. [Applied neurophysiology in the deep brain stimulation treatment of multiple sclerosis tremor]. *Rev Neurol* 2001;**32**:559–67.

## BOOK REVIEWS

### The Oxford dictionary of medical quotations

P McDonald. Oxford: Oxford University Press, 2003, pp 212, £25.00 (hardback). ISBN 0-19-263047-4

There are Oxford dictionaries of practically everything but not until now of medical quotations. The literary minded doctor need no longer be limited to the 15 or so entries in the regular Oxford University Press *Dictionary of quotations* when searching for something with which to get started a medical thesis, or display learning at lectures to rotaries clubs on the short arm of chromosome 6. Here are corralled all the most apt aphorisms an after dinner medical speaker should want. Or are they?

Peter McDonald has definitely found more statements by and relating to medicine than before. Roughly half is text listed by author to which are appended birth and death dates (where applicable—some aphorisms are happily still extant) and a statement of occupation. Roughly half is text indexed as keywords linking quotes on one theme to their various authors and spokespeople. Cross reference would have been easier if the text columns had been numbered or lined—occasionally it takes some searching to find the well-honed chiselled phrase that encapsulates the very essence of bubo, erysipelas, or fistula. Not all quotators are medical men or women. And not all his sources are listed as McDonald assembles this A–Z of quasi-medical sayings. But he has clearly torn many bits out of throwaway journals (*Hospital Doctor* and the *Canadian Medical Association Journal* seem to have commissioned more wise remarks than other contemporary medical magazines) in selecting statements from the very old (Hammurabi, King of Babylon, 1728–1686 BC, on teeth for a tooth) and the quite young (G Spence, orthopaedic surgeon born 1971, on audit). Are any memorable or immediately usable? Not many to my taste. Probably the most memorable and wittier (WC Fields: “after 3 days in hospital, I took a turn for the nurse”; although this is not a book of medical jokes) are the swipes and asides at medicine by outsiders. The themes

are familiar—pomposity, fake competence, and a liking for drink and cash. Quotations from the living are in the main rather banal, some laboured, and often obscure to the point of needing to be read twice in order to spot the reason for selection. Too few raise a dutiful smirk or nod of approval for their sagacity. Some of the missing biographical information should have been rather easy to locate. The most quoted people are good old Anon, Hippocrates, Osler, the Mayo brothers (of clinic fame), Shakespeare, Oliver Wendell Holmes, Claude Bernard, Bernard Shaw, and the Bible. As useful is Peter McDonald’s other approach of creating a keyword index from which contributing authors are found by secondary intention. Here the longer entries—death, doctor, disease, health, life et al—are awfully general. Readers may have some difficulty identifying a useful stem linking into a pithy stream of apt quotations on the short arm of chromosome 6.

### A Compston

### Mild cognitive impairment: aging to Alzheimer’s disease

R C Peterson. Oxford: Oxford University Press, 2003, pp 258, £39.50. ISBN 0-19-512342-5

It is hard to avoid the cliché “timely” to describe this book. The past few years have seen very considerable upsurge of interest in the very early pre-dementia stages of Alzheimer’s disease. The editor of the present book, Ronald Peterson, has been at the forefront of this initiative and his term, mild cognitive impairment (MCI), to describe this early prodromic stage, has been adopted around the world. It is highly appropriate, therefore, that he should edit a book on mild cognitive impairment bringing together major contributors. The book is conventional in form, containing chapters on clinical features, neuropsychiatric symptoms, neuropsychology, and structural and functional brain imaging, as well as pathology, biological markers, and treatment options. All of the chapters are very well written with admirably up to date referencing. The book will be of considerable interest to behavioural neurologists, neuropsychologists, and brain imagers.

I have only one or two quibbles with this otherwise excellent book, all of which reflect my own biases. There is an inherent view that MCI represents a clinically homogeneous syndrome, yet the current clinical definition is sufficiently wide to encompass the early stages of many forms of degenerative or even vascular brain disease. Consideration of the features that might separate those with early Alzheimer’s disease from those with early frontotemporal dementia, dementia with Lewy bodies, or vascular dementia is largely lacking. The neuropsychological sections were somewhat disappointing in that they neglect important work from the London group on the earliest cognitive markers for Alzheimer’s disease in subjects with known gene mutations. There is also important work from Melbourne on the value of computerised tests of visual paired associate learning that is not mentioned. The book in general is rather biased towards North America, with only two of the chapters containing contributions from European workers. These are, however, minor quibbles. All multi-authored books suffer from a

variable quality. Overall this is an excellent and important contribution that will be a standard reference for some time to come. It is also extremely reasonably priced.

**J R Hodges**

### Neuroscience at a glance, 2nd edn

R A Barker, S Barasi, M J Neal. Oxford: Blackwell Publishing Ltd, 2003, pp 122, £14.95. ISBN 1-405-11124-0

As the organiser of an integrated neuroscience course for undergraduates it was with great interest that I reviewed this book. The new curriculum that has been brought forward in most medical schools in the UK has followed on from the model developed in the US. The principle behind this is to integrate clinical and basic science material all through the course so that students learn the significance of basic science core knowledge in a clinical context and visa versa.

This textbook is ideal for integrated course teaching. It sets out the basic science in each area and then addresses the implication of this along side. It is nicely structured in a way that is comprehensible to medical students and sits well with most course structures. For example, it has five main headings, such as the anatomical and functional organisation of the nervous system, sensory systems, motor systems, and so on. Each sub-system is then divided into appropriate sub-sections, for example the cerebellum, the cortical motor areas, and so on. Each sub-section has one A4 set of diagrams pictorially illustrating the subject with text on the facing page. All of this makes for easy reading and quick comprehension. The authors modestly say that this is more of a revision or review text rather than a comprehensive textbook. However, the core curriculum at my institution would be well served by such a textbook and if a medical student knows the basis of this book he or she will be well ahead of peers.

I took the opportunity of showing this textbook to a number of my students who in fact had already had the first edition and were very familiar with the book. All were whole heartedly approving. The only minor quibble I have with the book is that the epilepsy section is particularly scanty. While the pathogenesis of epilepsy is still largely unknown, there is considerable room in the text for a better elucidation of some of the more up to date theories. For example, the new genetic advances have thrown light on disorders of ion channels in idiopathic generalised epilepsies, and the way mesial temporal sclerosis leads to neuronal network reorganisation.

Otherwise, I can’t commend the book highly enough and it should be on the bookshelves of all medical schools in the UK.

**O C Cockerell**

### Behavioral neurology & neuropsychology, 2nd edn

Todd E Feinberg, Martha J Farah. New York: McGraw-Hill, 2003, pp 882, \$110.00, (hardback). ISBN 0-07-137432-9

With the recent growing interest in cognitive or behavioural neurology among neurology

trainees in the UK, there is also need for a good text—one that conveys information accurately and swiftly, but also gets over the excitement of the subject. The second edition of this book is well worth looking at if you're trying to find such a text.

The editors have made a good job, at least in most cases, of keeping their contributors to the point and confined to relatively short chapters. As a result, they have been able to cover a wide range of topics, some from a clinical perspective, others from a more scientific stance. Impressively, although the chapters are short they are usually well referenced. Whatever your particular interest, I think most clinicians would find this a useful and informative text that covers the major neuropsychological syndromes well.

Where it perhaps could do better is on the subject of how to assess patients. This is never covered very well in most such texts, but I think it deserves far more space than given here. Also, the American perspective of some of the contributors may not be to everyone's liking. There are some chapters where one might be left with the erroneous impression that research on this topic happens only in that part of the world! Despite such little irritations, I would recommend more than a glance at this text. It certainly deserves to be on the shelves of most medical libraries.

M Husain

### Neurologic emergencies. A symptom orientated approach, 2nd edn

G L Henry, N Little, A Jagoda, T R Pellegrin. New York: McGraw-Hill Professional, 2003, pp 346, \$59.95. ISBN 0-07-140292-6

This is the second edition of *Neurologic emergencies*, a book which I imagine is aimed at physicians responsible for the emergency care of neurological problems, although this is never explicitly stated by the authors. It has a refreshingly practical approach and my initial irritation at the title was quickly dispelled by a preface pronouncing that "the days of the knee jerk CT may be drawing to a close". I live in hope. The first few chapters set out the basics of neuroanatomy and the evaluation of neurological symptoms but thereafter they are symptom based with sections on acute weakness, headache, visual disturbance and loss, psychogenic symptoms, dizziness, and seizures. I am sure this is the right approach but it does occasionally lead to problems with cross referencing. For example, pituitary apoplexy, which rightly appears as a cause of visual loss, is hardly mentioned as a cause of acute headache mimicking subarachnoid haemorrhage. Similarly, non-organic seizures are discussed in the very good chapter dealing with psychogenic neurological symptoms but is hardly mentioned in the epilepsy section where they might be more appropriately placed. The book has some odd omissions—no mention of the usefulness of deep tendon reflexes in determining the level of spinal cord disease or of measuring prostate specific antigen in metastatic disease of the spine. The authors also assert that arterial dissection is a rare event, which is not my experience from managing an acute neurological intake. However, these criticisms are in the detail and overall I

thought this was a comprehensive account of neurological emergencies and their management. I particularly liked the chapter on psychogenic neurological symptoms, which articulates something we are perhaps rather reluctant to admit to, "it is a legitimate use of the neurological examination to communicate to the patient that the examiner does truly possess a sophisticated knowledge of the nervous system which will in turn lead to trust and confidence in the examining physician". This book will be useful to all those who deal with neurological emergencies. In the UK I can see it appealing to casualty officers and physicians in training but I suspect a neurological readership would find it unfulfilling.

D J Dick

### Quick cognitive screening for clinicians. Mini mental, clock drawing and other brief tests

K Shulman, A Feinstein. London: Martin Dunitz, 2003, pp 176, £34.95, (hardback). ISBN 1-84184-239-7

What is the most effective way to screen for cognitive impairment in a busy clinic, or at the bedside? This is a question that most clinicians might contemplate, even if momentarily, in their busy schedules. In this brief text, Shulman and Feinstein take the reader briskly through the arguments for and against some common screening instruments.

There are several good aspects to the book. Firstly, before immersing themselves in the tests, the authors ask what one might want from an ideal screening test. Importantly, they cover—albeit rapidly—the application of signal detection analysis to clinical methods in the form of receiver operating characteristic (ROC) curves, together with the concepts of sensitivity and specificity. This lays the groundwork for much of what follows. Secondly, several of the tests that are scrutinised (for example, Mini Mental State Examination) are critically assessed, with both their potential advantages and pitfalls discussed. Thirdly, I was particularly pleased to find that the authors have included a chapter specifically on assessing frontal lobe function, because many standard screening instruments are often poor at revealing such dysfunction. It was also useful to see a chapter devoted to structured means of interviewing informants—often a critical part of the cognitive assessment. Finally, for a small text, this book has a very good list of references, directing the reader well to the primary sources.

If there are any deficiencies, perhaps one might quibble about the emphasis given by the authors to clock drawing, or the relative paucity of discussion on the use of combining tests. Similarly, the neuropsychiatric interests of the authors may not quite fit those of clinical neurologists. But overall this is an interesting and useful review of the methods available for screening cognitive impairment, which can be read quickly and efficiently, even by the busiest of clinicians.

M Husain

### Disorders of body image

David J Castle, Katherine A Phillips. Stroud: Wrightson Biomedical Publishers Ltd 2002, pp 176, \$79.00 (hardback). ISBN 1-871816-47-5

This collection of review chapters has a predominantly American–Australian provenance with further contributions from Great Britain and South Africa. The central emphasis is on disorders of body image as they present to clinical psychiatrists and psychologists and four of the 10 chapters deal with these subjects. Additional chapters on anthropology and normative data in childhood and adolescence provide a wider perspective. The principal body image disorders, body dysmorphic disorder and anorexia/bulimia nervosa, are part of the obsessive compulsive spectrum and have many features in common, including a strong genetic aetiology, obsessive compulsive symptoms, neuroimaging evidence of striatal dysfunction, further evidence of serotonergic dysregulation, and a therapeutic response to selective serotonin reuptake inhibitors.

Certain sections call for special mention. There is an excellent review by the editors of body dysmorphic disorder, a long recognised condition that has only recently gained acceptance in DSM-III. Many of these patients present to surgeons and dermatologists and an accompanying chapter draws attention to the hazards therein. The review of body image disorder in anorexia/bulimia nervosa is the most provocative. Anorexic subjects selectively restrict carbohydrate intake, leading to a fall in serotonergic activity. Normal dieters respond in much the same way, but when anorexics recover and return to a normal body weight cerebrospinal fluid 5HIAA levels are raised, suggesting a permanent state of serotonergic dysregulation. A number of studies have demonstrated an association between raised 5HIAA levels and traits of obsessiveness, perfectionism, pessimism, and negative affect (in contrast to an association between low 5HIAA and aggressivity and impulsivity). Kay *et al* suggest that such individuals restrict their carbohydrate intake to lower brain serotonergic activity so as to modify dystonic personality traits. Accordingly anorexia is an epiphenomenon rather than a primary goal.

Two chapters stand outside the mainstream. A neurologist provides a succinct account of the cortical representation of body image. Neurological disorders of body image—neglect, phantoms—are briefly described. Neuroimaging evidence for the cerebral localisation of emotion, particularly disgust, is the subject of another review. Sites of activation are listed but there is little attempt to interpret or to integrate these findings within a neurological framework.

The various contributions are, almost without exception, clear, concise, and easy to read. This is very much a mainstream offering, dealing as it does with an area of psychiatry in which cultural, psychological, and biological factors rub shoulders and it can be recommended to a wide range of trained psychiatrists and psychologists and to quite a few of their more adventurous trainees.

B Toone