Dysport produces intrinsically more swallowing problems than Botox: unexpected results from a conversion factor study in cervical dystonia

Defining a conversion ratio between Botox and Dysport: initial studies used inadequate clinical models, such as blepharospasm, hemifacial spasm or spasmodic dysphonia, which are extremely dose insensitive with respect to their therapeutic outcome and side effects. A later study used cervical dystonia as a more sensitive model, but referred to independent patient groups, thus provoking criticism because of the lack of interindividual cervical dystonia differences. By using cervical dystonia and applying a crossover design, the study by Ranoux and colleagues has consistentlyadvantages over previous ones. However, certain technique flaws: durations of action in the Dysport 1:4 group ranging from 0 to 491 days and a substantially larger standard deviation in this than in any other group, the Dysport 1:4 group obviously contained at least one, if not more, patients with clearly abnormal and unusual responses, thus erroneous overestimating this group's duration of action. The Dysport 1:3 group with a range of durations of action was not significantly different from the Botox group. The meaning of a duration of action of 0 days in the Botox group and in the Dysport 1:3 group remains unclear. With the pain score improvement in the Botox group being substantially lower than in the Dysport groups, the analgesic effect of Botox may well be underestimated. Additionally, by using the Tsui Scale to monitor the motor effects of cervical dystonia and patient estimates of pain, we assume that the choice of the Tsui Scale as the main judgement criterion was appropriate. In our experience, 100 Botox units (104 in this study, range 70–180, table 1) are sufficient to treat the great majority of patients. Furthermore, several recent studies have found multiple site injections to be more effective than single site injections.

Another aspect of the Ranoux et al study, however, is much more exciting: cervical dystonia treatment with Dysport has been noted to produce more swallowing difficulties than cervical dystonia treatment with Botox. In the light of the conversion ratio discussion, the logical argument was usually that Dysport was relatively overdosed compared to Botox. The Ranoux et al study suggests that this may not be true. Instead, with a dose independent fivefold higher incidence of swallowing difficulties, Dysport must be intrinsically different from Botox.

Determination of conversion factors with clinical models is a never ending story. Measuring the biological effect of different botulinum toxin preparations directly within the target muscle is a perspective for the future. With the advent of NeuroBloc/myobloc, the conversion factor discussion has become even more complex: apart from different therapeutic potentials, completely different side effect profiles now have to be taken into account.

References

We read with interest the letter by Lee et al. Although we agree that this complication is rare, we do not agree with their statement, “such a complication after cranial surgery has not previously been reported”. Having recently submitted an identical case to a different journal, we too have reviewed the literature and feel obliged to share our experience.

In 1985, Rousseaux et al. reported a case of an STA pseudoaneurysm that developed following a craniotomy for frontal lobe meningioma resection. In 1988, Shimoda et al. reported a case of multiple STA pseudoaneurysms following a craniotomy. Their haemophiliac patient sustained a golf ball injury to the left temporal region, which resulted in an intraparenchymal haematoma. An emergent left temporal craniotomy was performed. Forty days after surgery, two separate STA pseudoaneurysms were identified over the incision scar and treated by endovascular embolisation. Although it is conceivable that the golf ball was responsible for the pseudoaneurysms, the relation of the pseudoaneurysms with the incision scar is compelling evidence that they were the result of the craniotomy.

In 2000, an additional case of an STA pseudoaneurysm that developed after a craniotomy was reported by Tsutsumi and colleagues. Given the number of cranioaneries performed each year along the course of the STA, the occurrence of this complication is exceedingly low, but not unreported.

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References


BOOK REVIEW

Clinicians guide to sleep medicine


As the preface to this book states, the last 30 years has seen a rapid growth in the awareness of sleep disorders. In particular epidemiological studies have shown that obstructive sleep apnoea/hypopnoea syndrome is a prevalent disease that causes significant mortality. However, as readers of this journal will be well aware, not all sleep problems are respiratory related and any clinician working in this area needs to be familiar with all types of sleep disorders in order to make a differential diagnosis. A strength of this book is that it provides basic information on all common clinical sleep presentations; for each a brief outline is backed up with key references.

The author is an international authority on sleep related breathing disorders, and indeed many of the recent randomised placebo controlled trials showing symptomatic improvements following the treatment of obstructive sleep apnoea/hypopnoea syndrome have been carried out in his laboratory. Therefore it is not surprising that the book provides an authoritative overview in this area. The non-respiratory sleep disorders are less well covered; although, it could justifiably be argued that this bias merely reflects the lack of research in these disorders. Areas where there is a lack of evidence to support clinical practice are clearly stated.

In summary, this is highly readable book that provides practical information for those interested in broadening their knowledge of the management of with patients that present with common sleep disorders. Above all it makes the crucial point that education is the key for those working in this area—this simple book is likely to be a valuable resource for those seeking such an education.

Mary Morrell

Panayiotopoulos syndrome, a common and benign childhood epilepsy syndrome

Edited by C P Panayiotopoulos (Pp 158, £34.50). Published by John Libbey, Eastleigh, 2002. ISBN 0 86196 619 8

Dr Panayiotopoulos has written this monograph cum swan song about the syndrome that he has put on the diagnostic map to which his name has been attached. This childhood syndrome certainly breaks many “epilepsy rules”. The seizures usually start with autonomic symptoms nausea,retching, or vomiting and evolve to altered awareness usually only after several minutes. Tonic deviation of the eyes follows, lasting many minutes, which may evolve into hemi tonic or tonic clonic seizures. Sometimes children suffer from tonic seizures “ictal syncope”, another atypical form. About half of patients have seizures, which last more than half an hour—technically status epilepticus—and yet prognosis is good, and one third of affected children only ever experience one episode, the median number is three. The EEG often shows occipital spikes but the spikes may also be elsewhere and in one third are multifocal, usually a poor prognostic sign in epilepsy but not in this benign syndrome. There is often fixation-off sensitivity: electrogographic paroxysms which appear when the child is in complete darkness or in light but is not visually fixating. They are abolished by fixation, irrespective of ambient illumination.

He argues the case for a benign focal seizure susceptibility syndrome, including this condition and benign epilepsy with centrotemporal spikes as different expressions of a related underlying tendency.

In his book Dr Panayiotopoulos describes his syndrome in detail including all the clinical and electrographic variants, with numerous case histories. His clinical experience is manifest in the text, which presents his personal views. The main criticisms of the book are the quality of the publishing, with variable print quality and illustrations and one third of the text is difficult to read because it requires substantial padding to turn this relatively narrow topic into a whole book. However, it will be a reference source for anyone wishing to appreciate the subtleties of this uncommon condition.

Mark Manford

Neuropsychological interventions, clinical research and practice


As the editor of this book says, at one time those who reported psychometric testing data
in relationship to a particular lesion location or disease process were considered more experimental and scientific, where rehabilitators were perceived as seeking a therapeutic effect from atheoretical and non-experimental approaches. Although this attitude is still prevalent in some quarters, the recognizability of neuropsychological rehabilitation would appear to be on the increase. Several books on the topic have been published in recent years so why bother to buy or read this one? The main difference is that this book focuses on ideas, models, and methods driving current research into neuropsychological rehabilitation. The authors of each chapter were asked to address the question “How is research in this area conceptualised, scientifically framed, and experimentally advancing?” (p 13).

The book is comprised of 14 chapters (12 from North America and 2 from Europe) in three sections namely Foundations of Neuropsychological Interventions; Models of Intervention for Neuropsychological Impairments, and Future Directions (only 1 chapter in this section). The book is sound and contains some helpful and clinically relevant information. What I felt was lacking, however, was the integration of the work on different neuropsychological impairments into a sensible whole. If a person is referred for rehabilitation, we address the cognitive, psychosocial, behavioural, and emotional sequelae together and not address the individual problems piecemeal. A chapter on integrating theory and practice from a number of models, theories, and frameworks would have been welcomed. Nevertheless, there is much of value here for those engaged in the practice of rehabilitation or wanting to know the current state of play.

Barbara Wilson

Neuronavigation and neuroanatomy


The increasing use of frameless neuronavigation constantly poses new challenges to neurosurgeons. Its aim is to create a linkage between digital image data and anatomical structure. This provides increasing 3-D orientation and hopefully thereby making operative interventions less traumatic, more precise, and also avoids external frames for stereotactic biopsies. Its increasing use in skull based surgery has particularly aided this interdisciplinary branch of surgery. The major drawback has been that the localisation, achieved at the onset of surgery, as a result of intraoperative investigation (brain shift) may considerably reduce the accuracy of surgical targets. Therefore checks during the procedure are essential if safe and effective surgery is to be carried out. To date, mathematical modelling and real time data acquisition have not resolved this dilemma. The book provides some 200 pages of drawings which provide guidance for individual plans and to neuronavigational surgery by providing landmarks in the form of both points and shapes. It also provides some advice on surgical technique and approaches. It is useful both for the individual using neuronavigational techniques and also for those carrying out more traditional surgery.

As an atlas it is more of a reference book and reflects the experience of two very senior authors. The drawings are in colour, and although schematic, cannot be faulted in their purpose. If I were to make any criticism then I feel that the book is large and that there is a fair amount of wasted space, but this is entirely in keeping with the format of an atlas and perhaps one without would not have provided the clarity the authors were seeking to achieve. As a reference book it will prove both useful to individual surgeons and also to libraries.

James Van Dellen

Magnetic resonance imaging in dementia


This lavishly illustrated book provides a lucid and up to date account of magnetic resonance in the dementias. It is a timely as well as an informative book. Dementia represents an epidemic of staggering proportions for countries with ageing populations: almost 20% of those over the age of 80 years have dementia. Neurologists, psychiatrists, and neuroradiologists will increasingly be involved in the investigation of dementia and magnetic resonance imaging (MRI) will be a key element in that process. Recent European and American guidelines now recommend MRI or computed tomography (CT) at least once in the assessment of all patients with dementia.

In the opening chapters, a succinct summary of the scope of magnetic resonance technology in dementia is provided, including overviews of modern MRI techniques, magnetic resonance spectroscopy, and functional imaging. Individual disorders are covered in subsequent chapters, under the broad but appropriate headings of neurodegenerative disorders, disorders primarily affecting white matter, vascular dementias, and miscellaneous dementias. This classification proves to be a useful means of approaching the wide variety of diseases causing dementia, and to have particular relevance in terms of the imaging findings. The authors also strike the right balance between adequately discussing the common causes of dementia without neglecting the exotica. The illustrations of the MRI features of some of the less common dementias may be particularly valuable to leaf through when faced with a patient with an unusual scan.

However this book is far from being just an atlas of MR images in dementia. Its strength is that for each disease or condition, the clinical features, pathology, and where appropriate, genetics and treatment options are elegantly and concisely discussed. Even without the illustrations, it therefore proves to be an excellent textbook of dementia. The addition of numerous fantastically reproduced MR images, often accompanied where appropriate by MR spectra and line drawings, make this an invaluable and fascinating textbook for anyone with an interest in either dementia or neuroradiology. The rapid development of the field means this book should appeal to those in training or trained. Furthermore its illustrations are such that it would not seem out of place on your coffee table.

Jonathon Schott, Nick Fox, Adam Waldman


There are now too many neurology textbooks available with little to choose between them. Hardly a publishing house does not have one! However, this is a reference text with a difference since it is also a colour atlas. There are excellent illustrations on virtually every page. Its only rival is Parson’s colour atlas which is less comprehensive. This book is aimed at medical students and MRCP candidates. It is too detailed for medical students. MRCP candidates whom I showed it to liked its concise detail but felt that it could be improved with more emphasis on practical approach and differential diagnosis. It is well written with good summary lists and is a welcome addition despite the existing choice of neurology textbooks. It is reasonably priced and would be very useful to illustrate teaching sessions!

David Bateman