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Acute Stroke Treatment, Second Edition

This is one of those books in which the chapters are written by multiple contributors - predominantly from the USA and Europe. It covers the "Present Stage" of acute stroke treatment and has "A Look at the Future". The problem with any volume such as this is that it is bound to have a limited lifespan but for the next few years at least it will serve as a pretty creditable attempt to cover the basic issues in stroke care and also some of the more esoteric ones. In some ways it is concerned with acute assessment as well as treatment.

There is an excellent chapter on the often neglected and overlooked behavioural issues affecting the acute stroke patient. Although not specifically addressing their treatment this section at least highlights their existence and discusses lesion location. The Allen Score (!) makes a comeback in the section on clinical scales - here the authors refreshingly admit that no scoring system has ever proved more accurate than sound clinical judgement, although of course they are a necessary tool for clinical trials.

Imaging concentrates on CT with MRI techniques - some of which are now part of accepted clinical practice eg DWI - relegated to only a couple of pages. The sections on the general early management and possibilities for intensive stroke care are comprehensive if a little dogmatic. On thrombolysis

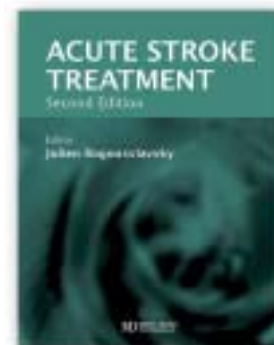
the evidence for intravenous and intraarterial delivery is well presented, although perhaps not in a questioning or critical way. For instance the licensing for rt-Pa being on the basis of one trial, the neutrality of other rt-Pa studies (and the possible reasons why), the pitfalls of post-hoc subgroup analyses, the continuing uncertainties are all rather glossed over.

Some aspects of haemorrhagic stroke and subarachnoid haemorrhage are covered. However the ISAT trial is missing as is STICH. This section of the book is therefore out of date already.

The "Look at the Future" includes what is already current by summarising existing guidelines but does also speculate on the future of neuroprotection (perhaps in conjunction with thrombolysis), gene therapy and cell therapy.

There are bound to be weaknesses in this type of book but as a neurologist with a vascular interest I would wish to have a personal copy. Neurologists with other areas of specialist interest would also learn plenty from it but perhaps they could access it from the department library rather than their personal bookshelf.

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Edited by: J Bogousslavsky
ISBN: 1-84184-078-5
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Price: £75

Plasticity in the Human Nervous System: Investigations with Transcranial Magnetic Stimulation

Readers of ACNR will be very familiar with the growing interest in plasticity of the nervous system and the implications for normal development, learning and repair after injury. Transcranial Magnetic Stimulation (TMS) has become established as one of the more important techniques for studying plasticity directly in humans alongside MEG and functional imaging. Unlike these latter modalities, however, TMS has the potential to modify plasticity actively and thus be used (eventually) therapeutically. Typically an electrical current pulse is passed through a figure-of-eight coil held over the cortex in an awake subject. This induces a magnetic field which is relatively unaffected by scalp and skull structures, which in turn induces current flow in underlying neurones, resulting in depolarisation and generation of action potentials.

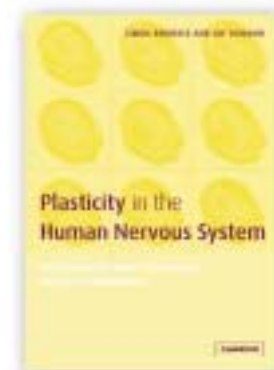
As a relatively painless and non-invasive technique, TMS offers several related approaches to the study of plasticity. Firstly it can be used to map (and demonstrate changes secondary to other interventions in) regions of the cortex that can elicit particular, usually motor, responses upon stimulation (albeit at fairly low spatial resolution). Secondly, it can provide standardised stimuli whose external effects can be modified by practice. Thirdly, when delivered as a chain of repetitive stimuli (repeated TMS or rTMS) the effect is to functionally

"lesion" underlying cortex in a reversible manner.

This book serves as a thorough and well-set out review of the use of TMS and rTMS in the investigation of brain plasticity. It is clearly written and readily comprehensible, and the editors have succeeded in consolidating the chapters into a coherent whole. It begins with a general discussion of plasticity and a critical review of the extent to which long-term potentiation (LTP) and long-term depression (LTD) can be assumed to underlie it. There follows a very clear discussion of TMS/rTMS techniques. The processes of plasticity underlying physiological development in infancy and childhood, normal practice-dependent learning and recovery from cortical injury in the older child and adult as demonstrated by TMS are then compared. Most of the brain-injury data relates to unihemispheric stroke. TMS has been used to demonstrate modification of motor maps and specifically the ability of current rehabilitative techniques to promote motor reorganisation. This type of approach could potentially provide invaluable proxy endpoints in comparative trials of rehabilitative therapies. Furthermore rTMS has potential as a therapeutic modality.

I would recommend this book as an authoritative yet highly accessible introduction to this topic.

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U Ziemann
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Price: £70

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