

EDITORIAL

Activities of Journal of Rehabilitation Medicine 2006 and 2007

Evidence for stroke rehabilitation

There is increasing scientific interest in developing a deeper neurobiological understanding of the recovery process after stroke and how it can be improved further through the plasticity of the brain, and of the best and most efficient care and management of stroke. With these issues in mind we arranged an international symposium entitled “Evidence for stroke rehabilitation – bridging into the future”, which was held in Göteborg, Sweden on 26–28 April 2006, in collaboration with the Institute for Neuroscience and Physiology in Göteborg and the Institutes for Neuroscience in Lund and Uppsala. Approximately 430 people from 38 different countries participated in the symposium.

The introductory lecture was given by Kjell Asplund, well-known researcher on stroke, and now also Director General of the Swedish Board for Health and Welfare. He set out the background for the development of clinical practice in stroke rehabilitation and presented the recently published Swedish guidelines for care of patients with stroke. Invited lectures were on: diagnostic techniques; evaluation of special intervention procedures; selected problem areas, such as pain; cognitive impairment; motor impairment; and evidence for stroke units; early-discharge programs coupled with home-based rehabilitation; and evidence from long-term follow-up studies. A total of 78 posters were also presented. Most of the lectures, along with PowerPoint presentations, and the poster abstracts can be found on the *Journal of Rehabilitation Medicine* website (www.medicaljournals.se/jrm). The symposium concluded with a panel discussion on evidence for the future.

The members of the program committee for the symposium were: Christian Blomstrand, Göteborg; Jörgen Borg, Uppsala; Michael Nilsson, Göteborg; Bo Norrving, Lund; Katharina Stibrant Sunnerhagen, Göteborg; and Gunnar Grimby, Göteborg, who acted as chairman.

The *Journal of Rehabilitation Medicine* will publish 8 review papers based on the lectures given in this symposium. The present issue includes papers on motor imagery by Sjoerd De Vries & Theo Mulder from the Netherlands, and on muscle weakness and the use of muscle training in patients after stroke by Richard Bohannon from the USA. Previously there has been some scepticism amongst clinicians on the subject of muscle strength training, but recent well-controlled studies have demonstrated that increased muscle strength can be achieved without significant side-effects. Thus, spasticity has been demonstrated not to increase. However, it remains to be proven that increased muscle strength after training will result in better performance in realistic activities and will enhance patients' participation in activities of daily living. There are highly intriguing findings on motor control and the potential for developing new ways for improving motor function after

stroke. An interesting approach is presented in the paper by De Vries & Mulder, in which they discuss the evidence for motor imagery or observation as novel methods in stroke rehabilitation. They conclude: “it is evident that motor imagery, observation and execution rely on the same neural processes. Future research should pay particular attention to the role of the primary motor cortex in covert action representation process and in motor recovery. Furthermore, it has been shown that neural re-organization may take place in a similar manner as it would have taken place following physical practice”.

Theoretical and experimental ideas around brain plasticity will be summarized in a future issue by Michael Nilsson from Sweden. One of the clinical examples is constraint-induced (CI) therapy, which has generated great interest in recent years. It was based initially on animal and pure experimental studies, but now data are available from a large randomized clinical multi-centre study. Steven Wolf from Atlanta, USA, who coordinated that study, presented a preliminary report on the results at the symposium. The results were published recently in an article in *JAMA* (2006; 296: 2095–2104) accompanied by an Editorial (*JAMA* 2006; 296: 2141–2142). It was demonstrated that a 2-week CI therapy program in patients more than one year after stroke resulted in statistically significant and clinically relevant improvements in arm motor function, which persisted for at least one year. Thus, further clinical recovery may be possible, given adequate intervention, long after what has been expected previously. This information has aspects that may also be relevant to other interventions, such as specific walking training, and that may motivate further long-term studies.

Future issues of the *Journal of Rehabilitation Medicine* will include review papers on organized stroke care by Lalit Kalra & Peter Langhorne from the UK, who have extensive experience of stroke units, and by Lotta Widén Holmqvist (from Sweden) & Peter Langhorne on the possibility of early supported discharge to the home for patients after stroke. It has been demonstrated clearly that stroke units improve outcomes for patients regardless of stroke severity, but after more severe strokes patients seem to have more to gain from such management. As pointed out by Kalra & Langhorne, good stroke care is expensive and adequate investment is required, both within hospitals and in the community, in order to achieve the full potential of organized stroke care. Carers' problems and need for support have also been discussed in recent years. Further studies are required in order to develop optimal and individual rehabilitation programmes. The evidence for stroke rehabilitation will be summarized in a future issue by Marion Walker from the UK.

In 2007, we will also publish papers on specific problems, such as post-stroke pain syndrome and its evaluation and

treatment, by Martin Grabois from the USA, and unilateral spatial neglect, a challenge that may be overlooked in stroke rehabilitation, by Nachum Soroker from Israel.

New avenues of publication and international contacts

As stated in the final issue of 2006, the not-for-profit Swedish Foundation of Rehabilitation Information, which owns *Journal of Rehabilitation Medicine*, has ended its collaboration with the Taylor & Francis Publishing Group from 2007. As of January 2007, *Journal of Rehabilitation Medicine* is published directly by the Foundation. We envisage several advantages in this: the publishing policy and processes will be connected directly to the Board of the Foundation and to the Editor and the Editorial office; there will be reduced publication costs, which ultimately will be of benefit to subscribers as the whole process will adhere to not-for-profit rules; and the possibility of moving towards open access will be in the hands of the journal. We also hope to increase interest in an electronic version of the journal.

One of our first actions, which will be of benefit to both authors and readers, is to increase the number of issues from 6 to 8, thereby enabling us to reduce the pile of accepted papers awaiting publication. This increase in the number of issues will be made without any increase in subscription fees.

Journal of Rehabilitation Medicine is now also an official journal for the International Society for Physical and Rehabilitation Medicine (ISPRM). That organization and our collaboration will be elaborated on in regular newsletters.

We will adapt to the extended international responsibility of the journal by promoting high-quality scientific publishing in rehabilitation medicine from all over the world, and in that respect we have also further increased the Editorial Board, with members representing different parts of the world. We have also increased the number of editors with Franco Franchignoni, Veruno, Italy and Kenneth Ottenbacher, Galveston, USA. We welcome the new members to our team and at the same time express our sincere thanks to all members of the Editorial Board and all reviewers representing different areas of rehabilitation and many different countries for their important work in promoting the quality of the journal.

On behalf of the organizations for Physical and Rehabilitation Medicine in Europe we will publish a supplement "*White Book for Physical and Rehabilitation Medicine in Europe*" together with this issue. The Editors of the *White Book* are Christoph Gutenbrunner, Anthony Ward and Anne Chamberlain. We are very pleased to have the opportunity to publish this book. It is hoped that it will be of great importance in harmonizing the speciality within Europe and will be useful in teaching, clinical training and practice. It will be distributed with the *Journal of Rehabilitation Medicine* to all of our subscribers worldwide.

Gunnar Grimby
Editor-in-Chief
Göteborg and Uppsala, December 2006