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EDITOR'S PAGE

Are we jumping too early with locomotor training programs?

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Dear *Spinal Cord* reader,

Scientists, journals, funders, clinicians and patients are hungry for optimism in spinal cord injury (SCI) and want to see the development of interventions which promise recovery and the potential to walk. The recent interest and media attention around locomotor training programs for people with AIS A and AIS B lesions is a good example. Locomotor training programs in which very disabled patients spend hours a day exercising and walking on treadmills with 3 or 4 therapists moving the legs, is an expensive intervention involving costly equipment and high staff to patient ratios. In addition, it requires patients to devote many hours to locomotors therapy and may deleteriously affect other aspects of their lives and divert attention from standard rehabilitation which focuses on optimizing independence and re-integration into society. Often patients delay return to work and engagement with family and the community in the pursuit of these programs. In some cases, patients do not learn to be independent from a seated position because of fears that this will negate potential for neurological recovery and the potential to walk. In addition, patients have been known to make enormous financial sacrifices to pursue locomotor training programs outside their own countries. This includes selling assets to travel abroad where the programs are heavily marketed through enticing websites promising recovery and access to the latest equipment and technology.

Of course patients are free to choose whatever kind of therapy they desire. However, professionals and the scientific community have a responsibility to provide accurate and evidence-based information about the efficacies of these interventions and it is not appropriate that locomotors training programs be advocated to highly disabled patients on the results of animal studies, single case studies or pre to post studies without control groups. These later types of research are appropriate for exploring the potential of locomotor training programs but we must hold off advocating and providing these interventions to the public until we have completed high quantity randomized controlled trials (RCT) and ensured that any benefits justify the substantial costs. In a following editorial page we will talk about RCT's in SCI research.

Any evaluation of locomotor training programs needs to involve careful consideration of the costs associated with providing the intervention. This not only includes the obvious and considerable costs associated with equipment and staffing but also includes the cost associated with missed opportunities for patients whose time spent engaging in locomotor training programs could have been spent working or engaging in life or in some cases receiving standard rehabilitation directed at optimizing function and independence. It also needs to include the emotional and psychological cost of promising a recovery that may not eventuate. We have an obligation to consider all the implications of advocating these interventions on every aspect of individuals' lives and on society generally. The real-life long-term benefits must be substantial to justify the cost.

SCI clinicians and the academic community must be primarily interested in the pursuit of truth and must not be held hostage to the expectations of discoveries and answers to SCI from funders, patients and the community. We will ultimately only progress and advance the care of people with SCI if we as a community are open-minded and critical in our thinking. If not, it should be little surprise that people with SCI demand these interventions and sacrifice much in the pursuit of them. Once a commercial market is established for these interventions, unscrupulous SCI health providers will provide them and propagate misinformation about their efficacies. This has already started to happen with the rolling out of locomotor training programs in place of standard physical therapy. This is premature and there is a very real danger that a huge amount of money, time and effort will be invested by patients, society, health care providers and therapists in providing locomotor training programs only to find in the future that the benefits, if any, are trivial and short lived and patients would have been better served by traditional physical therapy which focuses on independence and re-integration into society.

Spinal Cord is pleased to announce its new Impact Factor of 1.826 and a 5-year Impact Factor of 2.028. We thank all who helped achieve this good result.

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