

Challenges for Spinal Pain and Motor Control

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Back pain is a common and debilitating condition for which physiotherapists provide a range of treatments, with variable levels of evidence. Unfortunately, treatment outcomes are not optimal. The physiotherapy profession faces a range of challenges to consider in order to achieve the best outcomes for patients, including selection of the right treatment for the right patient at the right time. Exercise is one of the most effective treatments and exercise that targets motor control is one of the most promising. Motor control training aims to optimise the loading on the spine and pelvis by consideration of posture, movement and muscle activation. This intervention has moved through the cycle from being considered the panacea for all back pain to a more balanced view where it is targeted and individualised to specific patients. The weight of basic and clinical evidence supports the role of exercise focused on motor control issues in the treatment of low back and pelvic pain, but the contemporary view is that it must be individualized, and requires a broader view than reductionist

consideration of a few muscles. Contemporary research is highlighting adaptation in motor control across the motor control domains of movement, posture/alignment and muscle activation, and these observations parallel clinical interpretations of how patients present in practice. The understanding of optimal neuromuscular mechanisms for control of the spine and pelvis has evolved with greater understanding of the muscles and control strategies involved. Research is also highlighting the mechanisms that underpin the changes in motor control, which involves mechanisms from the spinal cord, to the motor and sensory regions of the brain, and higher cognitive functions and the relevance of consideration of different types of pain (e.g. nociceptive, neuropathic, central sensitization). This has implications for treatment. The aim of this presentation is to present the basis for contemporary understanding of the changes in the motor control system in low back and pelvic pain and the application of this understanding assessment and management of patients in clinical practice.

Future Perspectives of Physical Therapy in Asia

1 World Physical Therapy Challenge for the Profession

President of Taiwan Physical Therapy Association Suh-Fang Jeng

Physical therapy was first in need in Taiwan in 1960s because of polio outbreak that required provision of rehabilitation to surviving individuals with physical disability. To meet the increased demand in the quantity and quality of physical therapy services for various types of patients with dysfunctions or disabilities in the past five decades, 14 schools have consecutively launched entry-level programs (approximately 1000 students per year) and 8 universities have launched graduate programs (approximately 80 master students and 20 doctoral students per year) to consolidate the education and research bases. Furthermore, the legislature was passed in 1994 for examination and regulation of the profession that up to now there are over 6,000 registered physical therapists in the country. The global healthcare issues relevant to physical therapy profession in the 21st century have included ag-

ing population, in-equal healthcare resources, insufficient physical activity, and incrementing non-communicable diseases. These new issues have brought challenges as well as opportunities to our profession that the World Confederation for Physical Therapy has broadened the scope of physical therapy practice to disability rehabilitation, dysfunction treatment, disease prevention, and health promotion. To fulfill the modern role of physical therapists, Taiwan Physical Therapy Association has held a series of meetings in this fiscal year to establish "2030 Taiwan Physical Therapy Vision: Provision of High-Standard and Accountable Physical Therapy Services." Goals and strategic plans in the aspects of education, research, examination and practice are currently under development.