Spasticity is a major challenge to the neurorehabilitation team. It manifests as an increase in stretch reflexes, producing tendon jerks and resistance appearing as muscle tone. Effects of spasticity range from mild muscle stiffness to severe, painful muscle contractures and repetitive spasms that can prevent or hamper function, cause pain, disturb sleep, and major difficulties for hygiene care.

However, spasticity can also be useful, perhaps allowing a person to stand or walk if optimal level of spasticity. It is imperative that management is always patient and function focused rather than reduction of spasticity only.

The novel therapy of spasticity with Botulinum toxin type A (BTA) has been published as level A evidences since 2008. Currently Extracorporeal Shockwave Therapy (ESWT), Transcranial Direct Current Stimulation (tDCS) and repetitive Transcranial Magnetic Stimulation (rTMS) are increasing evidences in efficacy of Spasticity management. Optimizing of all these novel therapies are challenging. The trick in practical management are using them intelligently including indications, contraindication, dosages, how and when to use each of them. The optimization of these novel therapies requires careful patient assessment and realistic goals, knowledge of the functional anatomy, and understanding of how these novel therapies work and how best using them. Several techniques, using electromyography, electrical stimulation, ultrasound guidance are aimed to increase the accuracy of targeting during BTA injection. Neurorehabilitation after BTA injection also enhance treatment outcomes. Basic and sophisticated instrumental balance and gait training, therapeutic exercises, constraint induced movement therapy, functional electrical stimulation, functional orthoses are also important to increase functional outcome. Repetitive transcranial magnetic stimulation (rTMS), transcranial direct current stimulation (tDCS), extracorporeal shock wave therapy (ESWT) are increasing evidences supported in using alone or using after BTA injection. Optimizing all these novel therapies in spasticity treatment is importance.

Biography

Professor Areerat Suputtitada, M.D. is Professor of Rehabilitation Medicine, full time working at Department of Rehabilitation Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital in Bangkok, Thailand. She is the Director of Excellent Center for Gait and Motion at King Chulalongkorn Memorial Hospital and Chair of Neurorehabilitation Research Unit of Chulaongkorn University. She has been involved in education, residency training, research, and clinical treatment related to rehabilitation medicine for over 20 years. Her subspecialties are botulinum toxin and neurolysis, gait and motion, pain, and neurorehabilitation. She is an internationally recognized speaker, clinician, and researcher. Her works have been published extensively in numerous medical journals and books, more than 70 articles nationally and internationally. She has four important positions in the International Society of Physical and Rehabilitation Medicine (ISPRM) as the follows; (1) Chair of Women and Health Task Force, (2) Assembly of Individual Members Election Committee for Asia Oceania, (3) International Exchange Committee, and (4) Representative of the Active Individual Members to the Assembly of Delegate.

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