DAFTAR PUSTAKA

Agostinucci, 2013. Circumferential pressure's inhibitory effects on soleus H-reflex, *Translational Neuroscience*, vol. 4, no. 2, pp. 251-9.

Albani G, Cimolin V, Galli M, Vimercati S, Bar D, Campanelli L, Gandolfi R, Lombardi R & Mauro A, 2010. Use of surface EMG for evaluation of upper limb spasticity during botulinum toxin therapy in stroke patients, *Functional Neurology*, vol. 25, no. 2, pp. 103-7.

Alfieri V, 2001. Electrical stimulation for modulation of spasticity in hemiplegic and spinal cord injury subjects, *Neuromodulation*, vol. 4, no. 2, pp. 85-92.

Andersen KK, Olsen TS, Dehlendorff C & Kammersgaard LP, 2009. Hemorrhagic and ischemic strokes compared stroke severity, mortality, and risk factors, *Journal of The American Heart Association*, vol. 40, pp. 2068 – 72.

Ashworth B, 1964. Preliminary trial of carisoprodal in multiple sclerosis, *The Practitioner, vol.* 192, pp. 540-2.

Bakhtiary AH & Fatemy E, 2008. Does electrical stimulation reduce spasticity after stroke? A randomized controlled study, *Clinical Rehabilitation*, vol. 22, pp. 418-25.

Balci BP, 2018. Spasticity measurement, *Archives of Neuropsychiatry*, vol. 1, pp. 549-53.

Bandi S & Ward AB, 2010. Spasticity, in Stone JH, *et al.*(eds.), *International Encyclopedia of Rehabilitation*, diunduh 3 Januari 2019, http://cirrie.buffalo.edu/encyclopedia/en/article/32/

Barnes MP, 2008. An overview of the clinical management of spasticity, in Barnes MP (ed.), *Upper Motor Neurone Syndrome and Spasticity* 2nd edition, Cambridge University Press, USA

Basmajian JV, 1988. Research foundations of EMG biofeedback in rehabilitation, *Biofeedback and Self-Regulation*, vol. 13, no. 4.

Ben-Shabat E, Palit M, Fini NA, Brooks CT, Winter A & Holland AE, 2013. Intra- and interrater reliability of the Modified Tardieu Scale for the assessment of lower limb spasticity in adults with neurologic injuries, *Archives of Physical Medicine and Rehabilitation,* vol. 94; pp. 2494-501.

Bhimani R & Anderson L, 2014. Clinical understanding of spasticity: implications for practice, *Rehabilitation Research and Practice*, no. 279175, pp. 1-10.

Birenbaum D, Bancroft LW & Felsberg GJ, 2011. Imaging in acute stroke, *Western Journal of Emergency Medicine*, vol. XII, no.1, pp. 67-76.

Bohannon RW & Smith M, 1987. Interrater reliability of a Modified Ashworth Scale of muscle spasticity, *Physical Therapy*, vol. 67, pp. 206-7.

Boyd R & Graham HK, 2008. Objective measurement of clinical findings in the use of botulinum toxin type A for the management of children with CP, *European Journal of Neurology*, vol. 6, pp. 23–35.

Burke D, 1988. Spasticity as an adaptation to pyramidal tract injury, in Waxman SG (ed.), *Functional Recovery in Neurological Disease, Advances in Neurology*, Raven Press, New York, vol. 47, pp. 401–23.

Burke D, 2016. Clinical uses of H reflexes of upper and lower limb muscles, *Clinical Neurophysiology Practice*, vol. 1, pp. 9-17.

Chen SC, Chen YL, Chen CJ, Lai CH, Chiang WH & Chen WL, 2005. Effects of surface electrical stimulation on the muscle-tendon junction of spastic gastrocnemius in stroke patients, *Disability Rehabilitation*, vol. 27, pp. 105-10.

Cheung DK, Climans SA, Black SE, Gao G, Szilagyl GM & Mochizuki G, 2016. Lesion characteristic of individuals with upper limb spasticity after stroke, *Neurorehabilitation and Neural Repair*, vol. 30, no. 1, pp. 63-70.

Cho HY, In TS, Cho KH & Song CH, 2013. A single trial of transcutaneous electrical nerve stimulation (TENS) improves spasticity and balance in patients with chronic stroke, *Tohoju Journal of Experimental Medicine*, vol. 229 (3), pp. 187-193

Corston RN, Johnson F & Godwin RB, 1981. The assessment of drug treatment of spastic gait, *Journal of Neurology, Neurosurgery, and Psychiatry*, vol. 44, pp. 1035-9.

Cram JR, Kasman GS & Holtz J, 2011. The basics of surface electromyography, in Criswell E (ed.), *Cram's Introduction to Surface Electromyography* 2nd edition, Jones and Bartlett Publishers, Massachusett.

Dell MW, Lin CD, Singh JR & Christolias GC, 2016. The physiatric history and physical examination, in Cifu DX (ed.), *Braddom's Physical Medicine and Rehabilitation* 5th edition, Elsevier Saunders, Philadelphia, pp 3-39.

Denno MS, Gillard PJ & Graham GD, 2013. Anxiety and depression associated with caregiver burden in caregiver of stroke survivor with spasticity, *Archive of Physical Medicine and Rehabilitation*, vol. 94, pp. 1731-6.

Dittmar D, Dahlin J, Persson C & Schuttelaar ML, 2017. Allergic contact dermatitis caused by acrylic acid used in transcutaneous electrical nervous stimulation, *Contact Dermatitis*, vol. 77, pp. 406-12.

Doucet BM, Lam A & Griffin L, 2012. Neuromuscular electrical stimulation for skeletal muscle function, *Yale Journal of Biology and Medicine*, vol. 85, pp. 201-15.

Fries W, Danek A, Scheidtman K & Hamburger C, 1993. Motor recovery following capsular stroke, *Brain*, vol. 116, pp. 369–82.

Ganapathy V, Graham GD, DiBonaventura MD & Gillard PJ, 2015. Caregiver burden, productivity loss, and indirect costs associated with caring for patients with poststroke spasticity, *Clinical Intervention in Aging*, vol. 10, pp. 1793-802.

Ghotbi N, Ansari NN, Naghdi S & Hasson S, 2011. Measurement of lower-limb muscle spastcity: intrarater reliability of Modified Ashworth Scale, *Journal of Rehabilitation Research & Development*, vol. 48, no. 1, pp. 83-8.

Goshgarian HG, 2003. *Neuroanatomic Organization of the Spinal Gray and White Matter*, Demos Medical Publishing, New York.

Gracies JM, Burke K, Clegg NJ, Browne R, Rushing C, Fehlings D, Matthews D, Tilton A & Delgado MR, 2010. Reliability of the Tardieu Scale for assessing spasticity in children with cerebral palsy, *Archives of Physical Medicine & Rehabilitation*, vol. 91, no. 421–8.

Hatem SM, Saussez G, Della FM, Prist V, Zhang X, Dispa D & Bleyenheuft Y, 2016. Rehabilitation of motor function after stroke: a multiple systematic review focused on techniques to stimulate upper extremity recovery, *Frontier of Human Neuroscience*, vol. 10, no. 442.

Harvey RL & Zorowitz RD, 2016. Stroke syndrome, in Cifu DX (ed.), *Braddom's Physical Medicine and Rehabilitation* 5th edition, Elsevier Saunders, Philadelphia, pp. 1177-87.

Heckmann CJ, Gorassini MA & Bennett DJ, 2005. Persistent inward currents in motoneuron dendrites: implications for motor output, *Muscle Nerve*, vol. 31, pp. 135–56.

Houwen LEE, Scholtes VA, Becher JG & Harlaar J, 2011. Botulinum toxin A injection do not improve surface EMG patterns during gait in children with cerebral palsy-A randomized controlled study, *Gait & Posture*, vol. 33, pp. 147-51.

Im S, Park JH, Son SK, Shin J, Cho SH & Park G, 2014. Does botulinum toxin injection site determine outcome in post-stroke plantarflexion spasticity? Comparison study of two injection sites in the gastrocnemius muscle: a randomized double-blind controlled trial, *Clinical Rehabilitation*, vol. 28, pp. 604-13.

Jones I & Johnson MI, 2009. Transcutaneous electrical nerve stimulation, *Continuing Education in Anaesthesia, Critical Care & Pain*, vol. 9, no. 4, pp. 130-5.

Khanittanuphong P & Tipchatyotin S, 2017. Correlation of the gait speed with the quality of life and the quality of life classified according to speed-based community ambulation in Thai stroke survivors, *NeuroRehabilitation,* vol. 41, pp. 135-41.

Keller T & Kuhn A, 2008. Electrodes for transcutaneous (surface) electrical stimulation, *Journal of Automatic Control*, vol. 18, no. 2, pp. 35-45.

Kim KS, Seo JW & Song CG, 2011. Portable measurement system for the objective evaluation of the spasticity of hemiplegic patients based on the tonic stretch reflex threshold, *Medical Engineering & Physics,* vol. 33, pp. 62–9.

Kim TH, In TS & Cho HY, 2013. Task-related training combined with transcutaneous electrical nerve stimulation promotes upper limb functions in patients with chronic stroke, *Tohoku Journal of Experimental Medicine*, vol. 231, pp., 93-100.

Knikou M, 2008. The H-reflex as a probe: pathways and pitfalls, *Journal of Neuroscience Methods*, vol. 171, pp. 1-12.

Lance JW, 1980. Symposium synopsis, in: Feldman RG, Young RR, Koella WP (eds.), *Spasticity: disordered motor control*, Year Book Medical Publishers, Chicago, pp. 485–94.

Lee JM, Gracies JM, Park SB, Lee KH, Lee JY & Shin JH, 2018. Botulinum toxin injections and electrical stimulation for spastic paresis improve active hand function following stroke, *Toxins*, vol. 10, no. 426, pp. 1-11.

Levin MF and Chan CW, 1992. Relief of hemiparetic spasticity by TENS is associated with improvement in reflex and voluntary motor functions, *Electroencephalography of Clinical Neurophysiology*, vol. 85, pp. 131-42.

Li S, 2013. Breathing-controlled electrical stimulation for management of neuropathic pain and spasticity, *Journal of Visual Experiment*, vol. 71, no. e50077.

Li S & Francisco GE, 2015. New insight into the pathophysiology of post-stroke spasticity, *Frontiers in Human Neuroscience*, vol. 9, no. 192.

Lim YH, Choi EH & Lim JY, 2016. Comparison of effects of botulinum toxin injection between subacute and chronic stroke patients: a pilot study, *Medicine*, vol. 95, no. 7, pp. 1-6.

Llamas M, Santiago D, Navarro R, Sanchez-Perez J & Garcia-Diez A, 2010. Unusual allergic contact dermatitis produced by a transcutaneous electrical nerve stimulator, *Contact Dermatitis*, vol. 62, pp., 189-90.

Lyons GM, Leane GE, Clarke-Moloney M, O'Brien JV & Grace PA, 2004. An investigation of the effect of electrode size and electrode location on comfort during stimulation of the gastrocnemius muscle, *Medical Engineering & Physics*, vol. 26, pp. 873-8.

Malthora S, Pandyan AD & Rosewilliam S, 2011. Spasticity and contractures at the wrist after stroke: time course of development and their association with functional recovery of the upper limb, *Clinical Rehabilitation*, vol. 25, pp. 184-91.

Martins FL, Carvalho LC, Silva CC, Brasileiro JS, Souza TO & Lindquist ARR, 2012. Immediate effects of TENS and cryotherapy in the reflex excitability and voluntary activity in hemiparetic subjects: a randomized crossover trial, *Rev Bras Fisioter*, vol. 16, pp. 337-44.

Mehrholz J, Wagner K, Meissner D, Grundmann K, Zange C, Koch R & Pohl M, 2005. Reliability of the Modified Tardieu Scale and the Modified Ashworth Scale in adult patients with severe brain injury: a comparison study, *Clinical Rehabilitation*, vol. 19, pp. 751–9.

Miller L, Mattison P, Paul L & Wood L, 2005. The effects of transcutaneous electrical nerve stimulation on spasticity, *Physical Therapy Reviews*, vol. 10, pp. 201–8.

Mills PB and Dossa F, 2016. Transcutaneous electrical nerve stimulation for management of limb spasticity, *American Journal of Physical Medicine & Rehabilitation*,vol. 95, pp. 309-18.

Moura RC, Fukujima MM, Aguiar AS, Fontes SV, Dauar RFB & Do Prado GF, 2009. Predictive factors for spasticity among stroke patients, *Arq Neuropsiquiatr*, vol. 67, pp. 1029-1036.

Naghdi S, Ansari NN, Abolhasani H, Mansouri K, Ghotbi N & Hasson S, 2014. Electrophysiological evaluation of the Modified Tardieu Scale (MTS) in assessing poststroke wrist flexor spasticity, *Neuro Rehabilitation*, vol. 34, pp. 177-84.

Nardone A and Schieppati M, 2005. Reflex contribution of spindle group Ia and II afferent input to leg muscle spasticity as revealed by tendon vibration in hemiparesis, *Clinical Neurophysiology*, vol. 116, pp. 1370–81.

Ng SS & Hui-Chan CW, 2007. Transcutaneous electrical nerve stimulation combined with task-related training improves lower limb functions in subjects with chronic stroke, *Stroke*, vol. 38, pp. 2953-9.

Ng SS & Hui-Chan CW, 2009. Does the use of TENS increase the effectiveness of exercise for improving walking after stroke? A randomized controlled clinical trial, *Clinical Rehabilitation*, vol. 23, pp. 1093-103.

Ojaghihaghighi S, Vahdati SS, Mikaeilpour A & Ramouz A, 2017. Comparison of neurological clinical manifestation in patients with hemorrhagic and ischemic stroke, *World Journal of Emergency Medicine*, vol. 8, no.1, pp. 34 – 8.

Opheim A, Danielson A, Murphy MA, Persson HC, Sunnerhagen KS, 2014. Upper-limb spasticity during the first year after stroke, *American Journal of Physical Medicine & Rehabilitation*, vol. 93, no. 10, pp. 884-96.

Patrick E & Ada L, 2006. The Tardieu Scale differentiates contracture from spasticity whereas the Ashworth Scale is confounded by it, *Clinical Rehabilitation*, vol. 20, pp. 173-82.

Perna R & Temple J, 2015. Rehabilitation outcomes: ischemic versus hemorrhagic strokes, *Behavioural Neurology*, vol. 2015, pp. 1 – 6.

Petropoulou K, 2017. Spasticity: management with a focus in rehabilitation, *Spasticity*, International Neuromodulation Society, Greece

Pierrot-Deseilligny E & Burke D, 2012. Presynaptic inhibition of ia terminals, in *The Circuitry of the Human Spinal Cord: Spinal and Corticospinal Mechanisms of Movement*, Cambridge University Press, Cambridge, pp. 292-333.

Plantin J, Pennati GV, Roca P, Baron JC, Laurencikas E, Weber K, Godbolt AK, Borg J & Lindberg PG, 2019. Quantitative assessment of hand spasticity after stroke: imaging correlates and impact on motor recovery, *Frontiers in Neurology*, vol. 10, pp. 1-11.

Priebe MM, Sherwood AM, Graves DE, Mueller M & Olson WH, 1997. Effectiveness of gabapentin in controlling spasticity: a quantitative study, *Spinal Cord*, vol. 35, pp. 171-5.

Reiter F, Danni M, Lagalla G, Ceravolo G & Provinciali L, 1998. Low-dose botulinum toxin with ankle taping for the treatment of spastic equinovarus foot after stroke. *Archive of Physical Medicine and Rehabilitation*, vol. 79, pp. 532-5.

Riskesdas, 2013. *Riset kesehatan dasar*, Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI, Jakarta.

Saphiro S, 2003. Electrical current, in Cameron MH. (ed.), *Physical agents in rehabilitation from fesearch to practice*, Saunders Elsevier, Missouri.

Shaygannejad V, Janghorbani M, Vaezi A, Haghighi S, Golabchi K & Heshmatipour M, 2013. Comparison of the effect of baclofen and transcutaneous electrical nerve stimulation for the treatment of spasticity in multiple sclerosis, *Neurological Research*, vol. 35, no. 6, pp. 636-41.

Sheean, 2008. Neurophysiology of spasticity, in Barnes MP (ed.), *Upper motor neurone syndrome and spasticity* 2nd edition, Cambridge University Press, USA.

Singh P, Joshua AM, Ganeshan S & Suresh S, 2011. Intra-rater reliability of the modified Tardieu Scale to quantify spasticity in elbow flexors and ankle plantar flexors in adult stroke subjects, *Annals of Indian Academy of Neurology*, vol. 14, no. 1, pp. 23-6.

Smania N, Picelli A & Munari D, 2010. Rehabilitation procedures in the mangement of spasticity, *European Journal of Physical Rehabilitation Medicine*, vol. 46, pp. 423-38.

Sosnoff JJ, Gappmaier E, Frame A & Motl RW, 2011. Influence of spasticity on mobility and balance in persons with multiple sclerosis, *Journal of Neurologic Physical Therapy*, vol. 35, pp. 129-32.

Stein J & Brandstater ME, 2010. Stroke rehabilitation, in Frontera WR et al (ed.), *DeLisa's Physical medicine and rehabilitation* 5th edition, Lippincot Williams & Wilkins, Philadelphia, pp. 551-74.

Stevenson VL, 2010. Rehabilitation in practice: spasticity management, *Clinical Rehabilitation*, vol. 24, pp. 293-304.

Stevenson L & Jarrett L, 2016. *Spasticity management: a practical multidisciplinary guide*, Second Edition, CRC Press, London

Tamburella F, Scivoletto G & Molinari M, 2014. Somatosensory inputs by application of Kinesio Taping: Effects on Spasticity, Balance,and Gait in Chronic Spinal Cord Injury, *Frontiers in Human Neuroscience*, vol. 8, pp. 1-9.

Tekgul H, Polat M, Tosun A, Serdaroglu G & Gokben S, 2013. Electrophysiologic assessment of spasticity in children using H-reflex, *Turkish Journal of Pediatrics*, vol. 55, pp. 219-23.

Tenorio EF, Munoz DS, Coy JA & Soriano JG, 2018. Transcutaneous electrical nerve stimulation for spasticity: a systematic review, *Neurologia* (English edition, 2018).

Thibaut A, Chatelle C, Ziegler E, Bruno MA, Laureys S & Gosseries O, 2013. Spasticity after stroke: physiology, assessment and treatment, *Brain Injury*, Early Online, pp. 1-13.

Thompson AJ, Jarret L, Lockley L, Marsden J & Stevenson VL, 2005. Clinical management of spasticity, *Journal Neurology Neurosurgery Psychiatry*, vol. 76, pp. 459–63.

Thorvaldsen P, Asplund K, Kuulasmaa K, Rajakangas AM & Schroll M, 1995. Stroke incidence, case fatality, and mortality in the WHO MONICA project. World Health Organization Monitoring Trends and Determinants in Cardiovascular Disease, *Stroke*, vol. 26 (3), pp. 361-7.

Trompetto C, Marinelli L & Mori L, 2014. Pathophysiology of spasticity: implications for neurorehabilitation, *BioMed Research International* vol. 2014, Article ID 354906.

Winstein CJ, Stein J, Arena R, Bates B, Cherney LR, Cramer SC, Deruyter F, Eng JJ, Fisher B, Harvey RL, Lang CE, MacKay-Lyons M, Ottenbacher KJ, Pugh S, Reeves MJ, Richards LG, Stiers W & Zorowitz RD, 2016. Guidelines for adult stroke rehabilitation and recovery: a guideline for healthcare professionals from the American Heart Association/American Stroke Association, *Stroke*, vol. 47, pp. e98-169.

Wissel J, Mancak A, Brainin M, 2013. Toward an epidemiology of poststroke spasticity, *Neurology*, vol. 80, pp. 13-9.

Won, 2015. Neurosciences: presynaptic inhibition. *Human Physiology Academy*, diunduh 15 Januari 2019, <http://humanphysiology.academy/Neurosciences%202015/Chapter%201/P.1.3p%20Presynaptic%20Inhibition.html#PAD>

Wu YN, Huang SC, Chen JJ, Wang YL & Piotrkiewicz M, 2004. Spasticity evaluation of hemiparetic limbs in stroke patients before intervention by using portable stretching device and EMG, *Journal of Medical and Biological Engineering*, vol. 24, no. 1, pp. 29-35.

Zhang X, Tang X, Zhu X, Gao X & Chen X, 2019. A regression-based framework for quantitative assessment of muscle spasticity using combined EMG and inertial data from wearable sensors, *Frontiers in Neuroscience*, vol. 13, pp. 1-12.

Zorowits RD, 2010. Stroke, in Cuccurullo SJ (ed.), *Physical medicine and rehabilitation board review* 2nd ed, Demos Medical, New York, pp. 40-87.