

Relationship between Motor and Somatosensory Function of the Upper Extremity in Hemiparetic Stroke Patients

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Abstract : Background. An intact somatosensory system is important for the recovery of motor function after stroke. **Purpose.** This study evaluated the relationship between motor and somatosensory function outcome measures of the affected upper extremity in hemiparetic stroke patients, in the sub-acute phase. **Method.** Fifteen hemiparetic stroke patients in the subacute phase participated in this study. The Fugl-Meyer Assessment of the Upper Extremity (FMA-UE) and the Nottingham Sensory Assessment (NSA) scales were used to evaluate both motor and somatosensory function of the affected upper extremity in stroke patients. **Results.** There was strong positive correlation between the sensory domain of the FMA-UE and the NSA overall score ($\rho = -0.884$, $p = 0.0001$) in hemiparetic stroke patients in sub-acute phase. Also, no significant correlation was found between the FMA-UE and NSA total scores ($\rho = -0.182$, $p = 0.517$). **Conclusion.** Both the sensory domain of the FMA-UE and the NAS can be used to evaluate somatosensory function of the affected upper extremity in stroke patients. **Keywords:** stroke, sub-acute phase, upper extremity, somatosensory deficits, Fugl-Meyer Assessment of the Upper Extremity (FMA-UE), Nottingham Sensory Assessment (NSA).