

PREVALENCE OF SPASTICITY AFTER ISCHEMIC STROKE

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Aim: to investigate the prevalence and degree of spasticity following acute stroke and to identify clinical predictors.

Methodology: inclusion criteria were clinical signs of a limb paresis due to a first ever ischemic stroke. Exclusion criteria were transitory ischemic attack (TIA) and other stroke aetiologies. 148 consecutive patients were screened. 76 patients fulfilled inclusion criteria and were assessed within 5 days after stroke. 69 patients were re-examined after 6 months (+/- one week). Spasticity was assessed by the modified Ashworth Scale and muscle power using the BMRC scale.

Results: Out of 69 patients with initial limb paresis 43,5% (N=30) developed spasticity. Spasticity was present in both the upper and lower limb in 26,6% (N=8), the upper limb in 9% (N=13) and the lower limb in 7,9% (N=9).

The presence of spasticity was not influenced by gender ($p=0,098$) or age ($p=0,785$). Logistic regression analysis revealed that a more severe paresis in the proximal limb muscles was significantly ($p=0,00$) associated with a higher risk to develop spasticity as compared to distal muscles. Spasticity was more frequent in patients with hemihypoesthesia as compared to patients without sensory deficits ($p=0,006$).

Conclusions: our study provides extensive data regarding the prevalence and severity of spasticity six months following ischemic stroke. A more severe degree of paresis in the proximal limb muscles was associated with a higher risk to develop spasticity. This might point to the underlying pathophysiology of spasticity because non-pyramidal fibre tracts predominately innervate proximal muscles and are also supposed to be involved in the pathogenesis of spasticity. This might be due to a topographical relationship to the damaged pyramidal tract fibres.