E-Poster

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Feasibility and Comprehensibility of the SMD Decision Tree for Early Recognition of Spasticity

Topic: Complications/Sequelae (ie Spasticity, Immobilization and Frailty)

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BACKGROUND

Nurses and therapists play key roles in managing post-stroke patients (PSPs), but validated tools to recognise evolving complications such as spasticity are scarce. The Spastic Movement Disorder Decision Tree (SMD-DT) was developed to assess muscle tone, voluntary movement control and stretch-induced pain in the upper limb, helping healthcare providers decide whether to refer to a specialist for further spasticity management (including botulinum neurotoxin injections). The aim of the I-REFER study was to validate the SMD-DT.

METHODS

I-REFER was a cross-sectional validation and inter-rater reliability study. Nurses and physio- and occupational therapists used the SMD-DT (dichotomous endpoint: referral/no referral) to assess PSP and determine the need for specialist referral. These decisions were compared with assessments made by physicians experienced in spasticity management (the 'gold standard').

RESULTS

I-REFER included 69 PSP in early subacute, late subacute to chronic phases. The level of agreement was good (0.71) at an 85.5% rate of agreement for nurses and very good (0.80) at 89.9% for therapists compared to 'gold standard'. Sensitivity and specificity were 0.85/0.87 for nurses and 0.87/0.93 for therapists. Positive predictive values and negative predictive values were 0.89/0.81 for nurses and 0.94/0.85 for therapists. All Kappa values were highly significant ($p < 0.001$).

CONCLUSION

Nurses and therapists demonstrated substantial agreement with 'gold standard' evaluations when using the SMD-DT, with favorable comparative parameters. The SMD-DT is a promising tool for spasticity recognition. As the SMD-DT enables non-specialist healthcare providers to recognize SMD, its use may contribute to an earlier start of botulinum neurotoxin treatment.

Statement of Disclosures

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