Rehabilitation after stroke with focus on early supported discharge and post-stroke fatigue

Anna Bråndal

Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet för avläggande av medicine doktorsexamen framläggs till offentligt försvar i Sal B, byggnad 1 D, Norrlands universitetssjukhus
Fredagen den 3 juni, kl. 13:00.
Avhandlingen kommer att försvaras på svenska

Fakultetsopponent: Professor, Lena von Koch
Institutionen för Neurobiologi, Vårdvetenskap och Samhälle, Karolinska Institutet, Huddinge, Sverige
Rehabilitation after stroke with focus on early supported discharge and post-stroke fatigue

Background
Early Supported Discharge (ESD) with rehabilitation at home can improve patient outcome and quality of care for persons with mild to moderate stroke. Following stroke, fatigue is a common consequence that often becomes more evident when the patient returns home. Currently, there is insufficient evidence about how to estimate and treat post-stroke fatigue. The overall aim of this thesis was to develop, evaluate and implement ESD based on patients’ experience and request, evidence-based recommendations and local conditions. The aim was also to evaluate post-stroke fatigue with a potentially valid and reliable scale and to prepare for a randomized controlled trial (RCT) to investigate the effects on post-stroke fatigue of a structured cardiorespiratory training program (CITP) as a part of ESD.

Methods
In Paper I, nine stroke patients were interviewed about their experience of hospital stay and discharge. Paper II-III described and evaluated the development, content, implementation and effects of a locally adopted method for ESD in modern stroke care. Paper II included, 153 consecutive patients and paper III, 30232 patients registered in the Riksstroke registry in Sweden. Paper II-III evaluated clinical and functional health status, satisfaction in relation to needs, accidental falls/other injuries, resources, and patient reported outcome measurement (PROM) at 3 months. Separate multivariable logistic regression models were used to analyze associations between PROMs and ESD/no ESD. In Paper IV, translation and evaluation of the Fatigue Assessment scale (FAS) were done regarding psychometric properties when self-administered to persons with mild to moderate stroke. Paper V is a study protocol for a planned RCT of 50 consecutive stroke patients that will investigate if CITP added to the ESD-service may result in relieved post-stroke fatigue and increased oxygen uptake.

Results
The interviews in Paper I indicated that returning home gave the informants’ important insights and understanding of the stroke, its consequences and was an important factor for the recovery. Paper II-III showed that it is possible to develop and implement an adapted ESD service for stroke patients based on the patients’ experience and request, evidence-based recommendations and local conditions. Paper III showed that patients that received ESD were more satisfied with rehabilitation after discharge, had less need for assistance with ADL and less dysthymia/depression compared to patients that did not receive ESD. Study IV showed that the Swedish FAS used at home as a self-administered questionnaire is a reliable and valid questionnaire for measuring fatigue in persons with mild to moderate stroke.

Conclusion
Early supported discharge (ESD) in the setting of modern stroke unit care appears to have positive effects on rehabilitation in the subacute phase. The S-FAS used at home as a self-administered questionnaire is reliable and valid for measuring fatigue in persons with mild to moderate stroke. A RCT with CITP vs control to explore the effects on post-stroke fatigue as part of the ESD service is planned.

Keywords
Stroke, Early Supported Discharge, Post-stroke fatigue, Patient reported outcome measurement, Fatigue Assessment Scale, Cardiorespiratory training