



An individualized coaching program for patients with acute ischemic stroke: Feasibility study



P. Vanacker^{a,b,*}, D. Standaert^a, N. Libbrecht^a, I. Vansteenkiste^a, D. Bernard^c,
L. Yperzeele^b, G. Vanhooren^d

^a Department of Neurology, Sint-Lucashospital, Bruges, Belgium

^b NeuroVascular Reference Center, Antwerp University Hospital, Edegem, Belgium

^c Medical director, Sint-Lucashospital, Bruges, Belgium

^d Department of Neurology, Sint-Janhospital, Bruges, Belgium

ARTICLE INFO

Article history:

Received 12 December 2016

Received in revised form 14 January 2017

Accepted 23 January 2017

Available online 24 January 2017

Keywords:

Cerebral infarction

Education

Coaching

ABSTRACT

Objectives: An individualized stroke care program was developed to match patients' education with their needs regarding stroke knowledge, secondary prevention and rehabilitation. Our purpose was to assess feasibility of in-hospital and post-discharge, personalized stroke coaching service.

Methods: Acute ischemic stroke patients enrolled in ASTRAL-B stroke registry (Sint-Lucashospital, Bruges Belgium) with: (a) hospitalization between 12/2014–12/2015, (b) hospital-to-home discharge, and (c) without cognitive decline, were selected. The stroke coach contacted patients individually twice during hospitalization (2 × 20 min) and post-discharge via phone calls using the standardized WSO Post-Strokechecklist. Risk factor management, review of therapy and clinical evolution were discussed. Participants were contacted at 2 weeks, followed by repeat calls if necessary and ambulatory with the vascular neurologist at 1, 3, 6 and 12 months.

Results: Of all 255 patients meeting the inclusion criteria, 152 (59.7%) received individualized education during hospitalization by the stroke coach. Median age of our population was 74 years and median NIHSS 5. Majority of patients had at least two cardiovascular risk factors. Patients were not coached because of palliative care/decease (10%), unfavorable life expectancy (2%), dementia (8.5%) and lack of time due to short hospitalization (22%). A quarter of all patients were contacted at least once by phone, 12% were contacted at least twice after discharge. At three months, low stroke recurrence (5%) and mortality rates (4%) were identified, probably linked to improved adherence.

Conclusions: We demonstrated feasibility of an individualized coaching service executed by well-trained stroke nurse. Future research will focus on developing an online portal delivering post-discharge services to patients and caregivers.

© 2017 Elsevier B.V. All rights reserved.

Introduction

Stroke mortality has been declining over the past decades, partially by reduced incidence of stroke and lower case-fatality rates [1]. These significant improvements are partially related to the improved cardiovascular risk factor control interventions on arterial hypertension, diabetes mellitus and dyslipidemia control, and smoking cessation programs [2]. Despite evidence-based guidelines, these therapeutic strategies recommended for secondary prevention are rather modestly implemented. Significant deficiencies

in secondary prevention care in the real world have been reported [3]. In Belgian patients with stroke recurrence, cardiovascular risk factors were often not satisfactorily controlled, or they were not taking any antithrombotic agent at all [4].

So far, different types of interventions (educational, motivational, reminders or combinations) were studied to improve adherence to secondary preventive medication [5]. Until now, no standardized process for chronic stroke care has been accepted. As a result, management of post-stroke care varies greatly, and the needs of stroke survivors are not fully addressed. Implementation of cerebrovascular disease prevention programs may improve adherence and reduce stroke recurrence rates in the specific Belgian clinical practice as has been shown earlier by our group. Persistence was high with both pharmacological and non-pharmacological

* Corresponding author at: Sint-Lucashospital, Sint-Lucaslaan 29, 8310, Bruges, Belgium.

E-mail address: peter.vanacker@stlucas.be (P. Vanacker).

prevention strategies (71%) during the 24 months post discharge period [6]. Knowledge of the complexity of the patient and caregiver characteristics is essential in the promotion of adherence to secondary prevention measures. An impact of the particular Belgian health care system can be expected. Secondary prevention and clinical follow-up after a stroke is mainly the domain of the family doctor, who is guided by recommendations by the supervising neurologist.

In contrast with known predictors influencing the discharge destination, the impact of personal education and coaching programs on the hospitalization duration and discharge destination has not been studied sufficiently [7]. Although, we expect that post-discharge stroke support services have the potential to shorten hospitalisation durations, and to improve physical and mental health [8].

The purpose of this study is to assess the feasibility of an in-hospital and post-discharge, personalized stroke coaching program in the Belgian context. The stroke coach will be the key player in the cerebrovascular disease secondary prevention program.

2. Patients & methods

2.1. Study design and patient selection

We performed a retrospective analysis of a prospectively collected cohort of consecutive acute ischemic stroke (AIS) patients in a primary stroke center (Sint-Lucas hospital, Belgium). The inclusion criteria for the analysis were acute ischemic stroke with (a) hospitalization 12/2014–12/2015, (b) hospital-to-home discharge, and (c) without moderate or severe cognitive decline limiting the use of the coaching program. Family members of caregivers were accepted as contactperson for patients with severe cognitive decline. A modified version of the ASTRAL registry (CHUV, Lausanne) had been used to collect the patient data in a standardized way [9]. Medical variables collected and analyzed included demographics, cardiovascular risk factors, medication, previous stroke, type of clinical deficit, NIHSS at admission as described previously. Etiology was determined according to the TOAST classification. Medication adherence was defined by the persistence to all the prescribed pharmacologic and non-pharmacologic prevention measures proposed at discharge.

2.2. Stroke coach

In the institution, a well-trained and experienced stroke nurse was appointed as stroke coach from 01.09.2014 (0.4 FTE). The stroke coach contacted patients twice during their hospitalization (2 × 20 min) and post-discharge via phone calls using an adapted version of the standardized WSO Post-Stroke Checklist (PSC) [10]. The Post Stroke Checklist was developed by the Global Stroke Community Advisory Panel to assess the relevant problems (e.g. cognition, mood, life after stroke) of stroke survivors in a standardized way [6]. Since its development and endorsement by the World Stroke Organization, the Post Stroke Checklist has gained international recognition as a useful tool in stroke survivor follow-up and care [11]. A pilot study in the United Kingdom and Singapore demonstrated that WSO PSC may be a feasible and useful measure for identifying long term stroke care needs in a clinical practice. It takes approximately 13–17 min time to perform the checklist and was indicated by the patients and clinicians as useful and informative [12]. Risk factor management, review of medications and clinical evolution were discussed in both sessions and if possible together with the caregivers. The stroke coach tried to see all patients within the first 48 h after the hospital admission for a first session. Even that early, the important issue of the discharge

Table 1

A selection of baseline characteristics dichotomized based on the participation to the individual coaching program. Values are expressed as medians for continuous variables unless stated otherwise and as absolute counts and percentages for categorical variables.

	Participation (n = 152)	No participation (n = 103)	p-value
Demographics			
Age	74	79	<0.01
Male gender	73 (48%)	50 (49%)	0.93
Cardiovascular risk factors			
Arterial hypertension	111 (73%)	77 (75%)	0.76
Previous stroke	40 (26%)	32 (31%)	0.41
Diabetes mellitus	29 (19%)	25 (25%)	0.32
Hyperlipidemia	71 (47%)	48 (47%)	0.98
Atrial fibrillation	44 (29%)	46 (45%)	0.01
Smoking	33 (22%)	19 (19%)	0.53
Symptomatic peripheral vasculopathy	6 (4%)	5 (5%)	0.07
Presentation on arrival			
Admission NIHSS	5 (9)	9 (12)	0.02
Discharge home	152 (100%)	41 (39%)	<0.01

destination was tackled. Participants were contacted at 2 weeks after discharge, followed by repeat calls if necessary and at ambulatory consultations at 1, 3, 6 and 12 months. During these calls, an adapted version of the WSO post-stroke checklist was used to evaluate the patient's clinical evolution, needs, therapeutic adherence and reintegration. In case of aphasia, patients can participate if family members or caregivers take care of the communication. At these time points, medication adherence was assessed subjectively.

2.3. Statistical analyses

Continuous variables were described using medians and interquartile ranges; categorical variable using counts and percentages. Univariate comparisons between the patients who participated at the individual coaching programs and those who did not, were performed for all available variables. A logistic regression analysis assessed the significance of each variable separately. All tests were carried out at the 5% significance level. A historical cohort of our own stroke patients' database (12/2013–12/2014–ASTRAL-B registry) had been used to compare the clinical outcome with or without the intervention. First, we performed a univariate comparison to evaluate the differences in the study population (e.g. age, severity of stroke, cardiovascular risk factors). All analyses were performed using the statistical package R (version 3.0.2).

The collection, analysis and publication of data in the stroke registries were performed with the approval of the local ethics board.

3. Results

3.1. Baseline characteristics

Out of a total of 255 acute ischemic strokes hospitalized at the stroke center, 152 (59.7%) received individualized education during hospitalization by the stroke coach. The median age of our population was 74 years (IQR 62–88) and they had a median NIHSS of 5 at admission (IQR 2–11). An important proportion of patients (193, 76%) could be discharged back home after the hospitalization. The other demographics and baseline characteristics are shown in Table 1. In general, the proportion of cardiovascular risk factors were similarly distributed in both populations, except for the more frequent presence of atrial fibrillation (29 vs. 45%) in the non-participation group. Much of patients had at least two cardiovascular risk factors. Patients were not coached because of palliative care/decease (10%), unfavorable life expectancy (2%),

Download English Version:

<https://daneshyari.com/en/article/5627215>

Download Persian Version:

<https://daneshyari.com/article/5627215>

[Daneshyari.com](https://daneshyari.com)