Stroke – från symtom till överlevnad

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Specialistsjuksköterska och PhD

VÄSTRA GÖTALANDSREGIONEN

GÖTEBORGS UNIVERSITET

SAHLGRENSKA AKADEMIN

sekundärprevention *TOAST classification* *trombektomi*

perceived severity *time is brain* *prehospital delay* *storkärlssjukdom*

läkemedelsföljsamhet

ischemisk stroke

stroke mimic

onset-to-door time

SES

intracerebral blödning

stroke unit care

trombolys *Onset*

minor stroke

door-to-needle time

behandlingsfönster

AKUT-test

wake-up stroke *symptom recognition* *epidemiologi* *NIHSS* *stroke burden*

pares

Fokus: symtom och beslut att söka vård → (akut/hospital vård) → sekundärprevention → kort- och långtidsöverlevnad

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BMC Neurology

RESEARCH Open Access

Symptoms at stroke onset as described by patients: a qualitative study

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Abstract

Background Stroke is a common and severe disease that requires prompt care. Symptom expressions as one-sided weakness and speech difficulties are common and included in public stroke campaigns. For some patients stroke can present with subtle and less common symptoms, difficult to interpret. The symptom severity assessed by the National Institutes of Health Stroke Scale has decreased, and symptoms at onset may have changed. Therefore, we aimed to investigate how patients describe their symptoms at the onset of a first-time stroke.

Methods The study used a qualitative descriptive design and conventional content analysis. Data were collected through recorded interviews with 27 patients aged 18 years and older hospitalised with a first-time stroke between October 2018 and April 2020. Data were analysed on a manifest level.

Results Symptoms at stroke onset were presented in two themes: *Altered Reality and Discomfort* and *Changed Body Functions* and described in five categories. Various types of symptoms were found. All symptoms were perceived as sudden, persistent, and never experienced before and this appear as a "red thread" in the result. Regardless of symptom expressions, no specific symptom was described as more severe than another.

Conclusions Stroke symptoms were described with a variety of expressions. Many described complex symptoms not typical of stroke, which can make it difficult to recognise the symptoms as a stroke and delay medical care. Public stroke campaigns should emphasize the importance of seeking medical care at the slightest suspicion of stroke and could be designed to help achieve this.

Keywords Patients, Stroke, Symptoms, Interviews, Content analysis

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Background

Stroke is a common cause of mortality and morbidity worldwide [1] and associated with devastating consequences [2]. Rapid treatment in ischemic stroke with reperfusion treatment is essential to minimizing brain damage [1], and reducing the time from symptom onset to medical care is often imperative for a favourable prognosis [3, 4]. However, the time from symptom onset to medical care remains long for many patients [5, 6]. Patients' inability to interpret stroke symptoms accurately has proven to be troublesome [7, 8], especially when symptoms are perceived as less serious or puzzling [9]. Even for healthcare providers, it can be difficult

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Kortare tid "door-to-treatment" men…
· kvarvarande fördröjning:
symtomdebut → ankomst till sjukhus

Att undersöka hur patienter själva beskriver sina symtom vid insjuknandet i en första stroke (Intervjustudie)

Symtomdebut — Beslut — Prevention — Överlevnad

Studiedeltagare & datainsamling

Intervjuer med sjukhusvårdade patienter 18 år och äldre

Förstagångs stroke mellan oktober 2018 och april 2020

Tre strokeenheter i Västsverige

ICD-10 (1997-); I61, I63 och I64.

Exklusion: TIA/SAH, språk-/beslutssvårigheter eller för svårt sjuka för deltagande

	Total ***n*** **= 27**	**Men** ***n*** **= 16**	**Women** ***n*** **= 11**
Age range, years	34–92	34–92	38–90
Median age, years	70.4	67.8	73
Mean age, years (standard deviation)	67.9 (15.6)	67.5 (14.1)	68.2 (18.6)
Atrial fibrillation, n (%)	1 (3.7)		1 (9.1)
Ischemic heart disease, n (%)	1 (3.7)		1 (9.1)
Hypertension n, (%)	17 (63)	11 (68.8)	6 (54.6)
Diabetes, n (%)	6 (22.2)	5 (31.3)	1 (9.1)

Symtomdebut — Beslut — Prevention — Överlevnad

Innehållsanalys: fokus på ordval, upplevelse och variationer av symtombeskrivningar.

”Det var balansproblemen som fick mig att förstå att något inte riktigt stod rätt till. Jag brukar ju inte behöva ta stöd mot en vägg.”

Table 4 Overview of themes and categories

Themes	Categories
Altered Reality and Discomfort	Sensation of illness
	Experiences of discomfort
	Changed perception of reality
Changed Body Functions	Loss of bodily functions
	Loss of bodily control

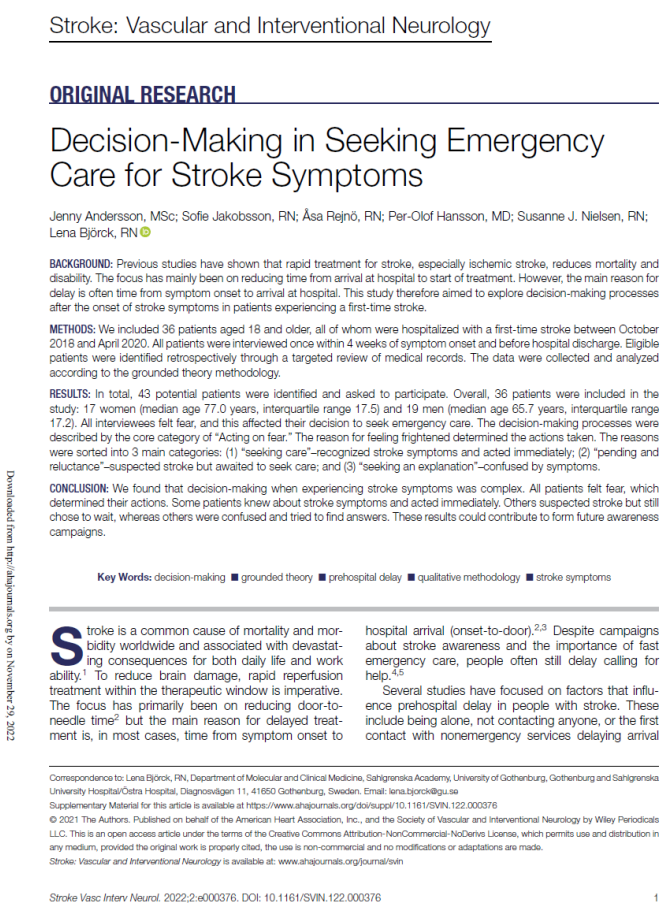
”Jag kände igen tavlorna på väggen som mina, men jag trodde inte att jag var hemma. Därför blev jag så förvånad över vad de gjorde där.”

”Sedan gick jag ut i köket och passerade en liten byrå som jag har där: men kära nån! Jag tror att jag sa det till den också: ”flytta på dig så att jag kan komma till köket”.

”Jag vaknade och kände mig inte bra, men jag visste inte vad det var. Lite trött … som om jag höll på att bli sjuk. Jag gick fortfarande i morgonrock hela dagen … jag tror inte att jag har legat i sängen på dagen på över 50 år.”

Symtomdebut — Beslut — Prevention — Överlevnad

Take-home: symtom beskrevs med stor ordrikedom och som nya och främmande.



Stroke: Vascular and Interventional Neurology

ORIGINAL RESEARCH

Decision-Making in Seeking Emergency Care for Stroke Symptoms

Jenny Andersson, MSc; Sofie Jakobsson, RN; Åsa Rejnö, RN; Per-Olof Hansson, MD; Susanne J. Nielsen, RN; Lena Björck, RN

BACKGROUND: Previous studies have shown that rapid treatment for stroke, especially ischemic stroke, reduces mortality and disability. The focus has mainly been on reducing time from arrival at hospital to start of treatment. However, the main reason for delay is often time from symptom onset to arrival at hospital. This study therefore aimed to explore decision-making processes after the onset of stroke symptoms in patients experiencing a first-time stroke.

METHODS: We included 36 patients aged 18 and older, all of whom were hospitalized with a first-time stroke between October 2018 and April 2020. All patients were interviewed once within 4 weeks of symptom onset and before hospital discharge. Eligible patients were identified retrospectively through a targeted review of medical records. The data were collected and analyzed according to the grounded theory methodology.

RESULTS: In total, 43 potential patients were identified and asked to participate. Overall, 36 patients were included in the study: 17 women (median age 77.0 years, interquartile range 17.5) and 19 men (median age 65.7 years, interquartile range 17.2). All interviewees felt fear, and this affected their decision to seek emergency care. The decision-making processes were described by the core category of "Acting on fear." The reason for feeling frightened determined the actions taken. The reasons were sorted into 3 main categories: (1) "seeking care"–recognized stroke symptoms and acted immediately; (2) "pending and reluctance"–suspected stroke but awaited to seek care; and (3) "seeking an explanation"–confused by symptoms.

CONCLUSION: We found that decision-making when experiencing stroke symptoms was complex. All patients felt fear, which determined their actions. Some patients knew about stroke symptoms and acted immediately. Others suspected stroke but still chose to wait, whereas others were confused and tried to find answers. These results could contribute to form future awareness campaigns.

Key Words: decision-making ■ grounded theory ■ prehospital delay ■ qualitative methodology ■ stroke symptoms

Stroke is a common cause of mortality and morbidity worldwide and associated with devastating consequences for both daily life and work ability.[1] To reduce brain damage, rapid reperfusion treatment within the therapeutic window is imperative. The focus has primarily been on reducing door-to-needle time[2] but the main reason for delayed treatment is, in most cases, time from symptom onset to hospital arrival (onset-to-door).[2,3] Despite campaigns about stroke awareness and the importance of fast emergency care, people often still delay calling for help.[4,5]

Several studies have focused on factors that influence prehospital delay in people with stroke. These include being alone, not contacting anyone, or the first contact with nonemergency services delaying arrival

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Beslutet att söka vård är en komplex process, som kan påverkas av många faktorer

Att utforska beslutsprocessen kring att söka akutsjukvård efter debut av strokesymtom vid förstagångsstroke. (Intervjustudie)

Symtomdebut — **Beslut** — Prevention — Överlevnad

Studiedeltagare & datainsamling

Intervjuer med sjukhusvårdade patienter 18 år och äldre

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Exklusion: TIA/SAH, språk-/beslutssvårigheter eller för svårt sjuka för deltagande

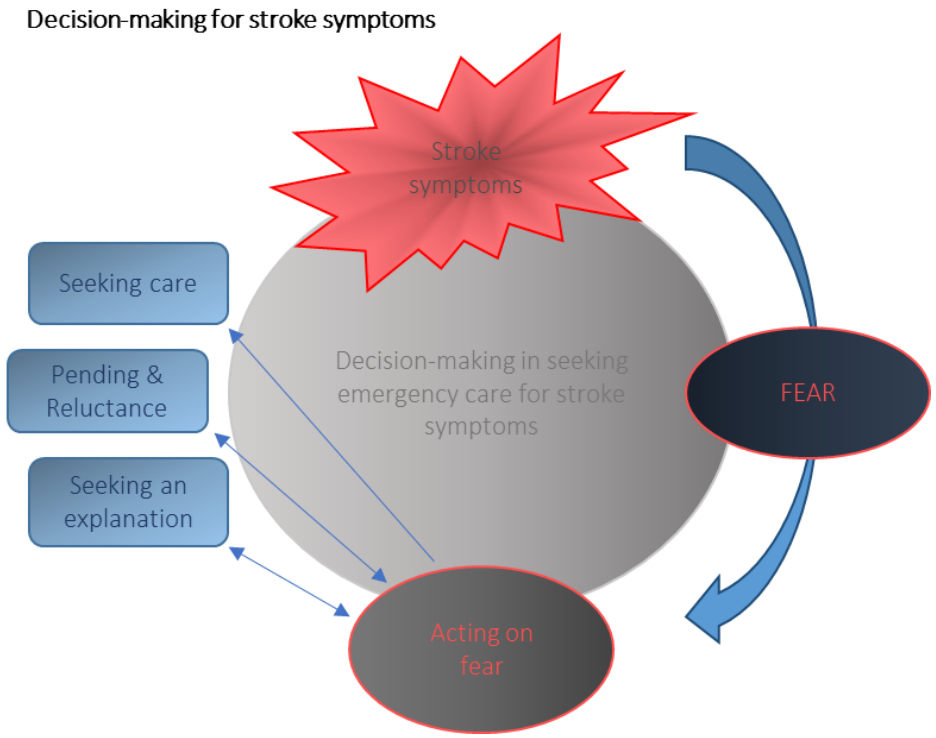
	Total n = 36	Men n = 19	Women n = 17
Age range (y)	34–95	34–92	38–95
Median age (y) (IQR)	71.7 (18.0)	65.7 (17.2)	77.0 (17.5)
Mean age (y) (SD)	69.8 (14.7)	67.9 (13.0)	71.9 (16.1)
Married/cohabitating, n (%)	21 (58.3)	13 (68.4)	8 (47.0)
Living alone, n (%)	15 (41.7)	6 (31.6)	9 (52.9)
Atrial fibrillation, n (%)	3 (8.3)	–	3 (8.3)
Ischemic heart disease, n (%)	3 (8.3)	1 (2.8)	2 (5.6)
Hypertension, n (%)	19 (52.8)	12 (33.3)	7 (19.4)
Diabetes, n (%)	8 (22.2)	5 (13.9)	3 (8.3)

Symtomdebut — **Beslut** — Prevention — Överlevnad

Grounded Theory: huvudangelägenhet → kärnkategori → största förklaringsvärdet/action

”Jag sa: du måste ringa pappa om det här … för jag vet inte vad det är. Jag känner inte igen det här …”

”Ingen vill ha en stroke”



”Att ringa 112 så fort som möjligt, för jag vet att… vid stroke räknas varje minut. Det är viktigt att komma in så snabbt som möjligt.”

”Nej, jag förstod inte varför jag kräktes när jag åt, det kom upp direkt.

”Så jag öppnade bara dörren och ropade på honom.” Jag sa till honom: ”Ring ambulansen, jag tror att jag har fått en stroke. Var inte rädd. Gör som jag säger. Säg till dem att jag andas bra, men att jag bara är förlamad!”

”Jag beställde pizza på nätet. Då behövde jag inte prata med någon.”

”Det hade ju kunnat vara bara högt blodsocker"

Symtomdebut — **Beslut** — Prevention — Överlevnad

Take-home: rädslan är central; kan driva snabb handling – eller försena beslut

Huvudbudskap

Patienters beskrivningar av strokesymtom kan skilja sig från den allmänt kända symtombilden

Resultaten visar att det är avgörande att reagera på nya och oväntade symtom

Sök vård vid minsta *misstanke* om stroke, även om symtomen är atypiska eller upplevs som mindre allvarliga

Studiedeltagare

Secondary Preventive Medication and Socioeconomic Factors in Patients with Ischemic Stroke – a Register-Based Study

Jenny Andersson, RN PhD student[a,b], Susanne J Nielsen, RN PhD[a,g], Sofie Jakobsson, RN PhD[c], Tatiana Zverkova Sandström, Bsc[a], Martin Karlsson, MD PhD[a], Katarina Jood, MD PhD[h,i], Åsa Rejnö, RN PhD[d,e,f], Lena Björck, RN PhD[a,b]

- Registerbaserad studie av 149 156 patienter
- Ålder 18–84 år (medianålder 72 år)
- Första registrerade ischemisk stroke, 2006–2021
- Data från Nationella Patientregistret, Läkemedelsregistret och LISA-registret (Longitudinell integrationsdatabas för sjukförsäkrings- och arbetsmarknadsstudier
- ICD-10 (1997–): I63–I64
- Personer med tidigare stroke, TIA, traumatisk hjärnskada, subduralhematom eller subaraknoidalblödning exkluderades.

Symtomdebut — Beslut — **Prevention** — Överlevnad

Andersson, J. et al. *In manuscript*

Analys:

- 6 läkemedelsklasser
- Utbildningsnivå (<10; grundskola, 10–12; gymnasium, >12; universitet utbildning) och familjeinkomst (Q1;Q5)
- Andel dagar täckta av läkemedelsbehandling PDC > 80 %
- Justerade oddskvoter (OR) estimerat för uttag

Fokus: association mellan utbildningsnivå, familjeinkomst och läkemedelsuttag.

Take-home: tydlig socioekonomisk gradient för uttag

Symtomdebut — Beslut — **Prevention** — Överlevnad

Studiedeltagare & datainsamling

Survival in 463 886 Patients with Ischemic Stroke - A Nationwide Register-Based Study from 1987 to 2021

Jenny Andersson, RN PhD student[a,b], Susanne J Nielsen, RN PhD[a,f], Tatiana Zverkova Sandström, Bsc[a], Martin Karlsson, MD PhD[a], Katarina Jood, MD PhD[g,h], Åsa Rejnö, RN PhD[c,d,e], Lena Björck, RN PhD[a,b]

- Registerbaserad studie av 463 886 patienter
- Ålder 18–84 år
- Första registrerade ischemisk stroke, 1987–2021
- Data från Nationella Patientregistret och Dödsorsaksregistret
- ICD-9 (1987–1996): 434 och ICD-10 (1997–): I63–I64
- ICD-9 (1987–1996); ICD-10 (1997-): samsjuklighet och död
- Personer med tidigare stroke, TIA, traumatisk hjärnskada, subduralhematom eller subaraknoidalblödning exkluderades

Symtomdebut — Beslut — Prevention — **Överlevnad**

Andersson, J. et al. *In manuscript*

Analys:

- Tidsperioder: 1987–1998, 1999–2010, 2011–2021
- Utfall: 7- dagar, 28- dagar, 1- år, 5- år, 10- års mortalitet
- Sannolikhet för överlevnad modellerad med Kaplan–Meier-metod
- Dödlighetstal per 1 000 person-år
- Hazard-kvoter (HR) för totalmortalitet

Symtomdebut — Beslut — Prevention — **Överlevnad**

Fokus: temporala trender i överlevnad

Take-home: dödligheten efter ischemisk stroke har minskat markant över tid

*Model 1, adjusted for age, sex; index stroke year **Model 2, adjusted for age, sex, baseline comorbidity, index stroke year

TACK!