HEALTH-RELATED QUALITY OF LIFE ALONG FIRST YEAR POST-STROKE IN SPAIN

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INTRODUCTION

- Stroke is the 2nd cause of death in Spain, and the 3rd in women[1]. Also, is the 3rd cause of disability-adjusted life years in the world[2]. For both, male and female, stroke is the 1st cause of permanent neurological consequences[3].
- Up to 16% of patients die within the first month post-stroke, and within one year post-stroke event nearly 30% die[1]. About one half of survivors are left with permanent functional disabilities and have significant needs for rehabilitation and long-term care[4].
- Patients QoL is severely affected by stroke, specially the physical dimensions[5].
- Atrial fibrillation (AF), which increases stroke risk, severity, recurrence and mortality[6] results in worse HRQoL/disability.
- CONOCES is the first Spanish study that evaluates socioeconomic cost and HRQoL in stroke patients with and without AF.

OBJECTIVE

The objective of the present study was to analyse the health-related quality of live (HRQoL) one year post-stroke in patients with or without AF and the caregivers burden.

METHODS

- The CONOCES study "CONOCES: socioeconomic stroke costs in Spain" is an observational, multicentre, naturalistic and prospective study of stroke HRQoL and costs.
- The study included 16 hospitals (stroke units of National Health System hospitals) from 16 Spanish regions. Patients were recruited between November 2010 to May 2011.
- Inclusion criteria was: patients older than 18 and clinical stroke diagnostic (ischemic or haemorrhagic stroke) with less of 24 hours evolution. We included 50% of patients with AF and 50% with non-AF. Patient exclusion criteria was ischaemic attack, stroke history, and intrahospital stroke.
- Patients were recruited at first stroke hospitalization (1st visit). Following visits were at 3 and 12 months post-stroke. The information was collected for patients and caregivers through direct physician interviews. We analysed neurologic and disability patient status with NIH scale (0-42, >20=worse status), Rankin scale (0 to 5, maximum dependency=5) and Barthel index (0-100, <20=maximum dependency).
- HRQoL questionnaire (EQ-5D and VAS: Visual Analogue Scale) was administered at hospital entry, 3 and 12 months post-stroke. Caregiver burden was collected at 2nd and 3rd visit using Zarit Burden Inventory (0-110, where 110 is the maximum burden). Adaptation to local language was by Martín *et al*. (1996)[7].

RESULTS

A total of 321 stroke patients were recruited, 160 with and 161 without AF. Neurologic status at hospital exit was 5.31 with statistically significant differences between AF and non-AF patients and between hospital entry and exit (**table 1**). Post stroke disability measured by Rankin and Barthel scales showed statistically significant differences between AF and non-AF patients and between visits (**table 1**). Nearly 49% of patients had a moderate to severe disability at hospital exit which decreased to 30% 1 year post-stroke.

Table 1. Patient sociodemographic and clinical characteristics.

	non-AF N=161	AF N=160	Total patients N=321	p-value
Sociodemographic characteristics				
Age (years±SD)	67.78±14.54	76.46±9.97	72.12±13.19	<0.001
Male	60.9%	48.8%	54.8%	0.03
Basic or any estudies	78.2%	83.7%	81.0%	0.44
Pensioner patient	62.1%	75.6%	68.8%	0.02
Married	69.6%	57.5%	63.6%	0.01
Widow	14.9%	30.6%	22.7%	
Never smoke patient	50.9%	67.5%	59.2%	0.001
Smoker patient	26.7%	10.0%	18.4%	
Non-alcoholic patient	49.1%	69.4%	59.2%	0.001
Occasional physical activity	53.4%	41.9%	47.7%	0.02
Clinical characteristics				
Rankin scale hospital exit >2	41.0%	56.3%	48.6%	0.004
Rankin scale 2nd visit >2	29.0%	41.8%	35.0%	0.016
Rankin scale 3rd visit >2	22.5%	36.4%	28.9%	0.01
Barthel index hospital exit (mean)	71.18	59.17	65.33	0.003
Barthel index 2nd visit (mean)	81.74	71.93	77.08	0.005
Barthel index 3rd visit (mean)	84.27	76.21	80.56	0.014
NIH scale at hospital entry (mean±SD)	7.39±5.53	10.84±7.48	9.11±6.79	<0.001
NIH scale at hospital exit (mean±SD)	4.25±5.73	6.45±7.84	5.31±6.91	0.005
Exitus during first year post-stroke	13.0%	21.9%	17.4%	0.026
Recurrences	6.2%	9.4%	7.8%	0.198

EQ-5D was completed by 274 patients – 127 with AF and 147 without AF – and VAS by 249 patients– 113 with and 136 without AF –.
The average utility scores of EQ-5D were 0.57, 0.62, and 0.65 (**table 2**). We found differences between AF and non-AF obtained at hospital entry (p=0.029) and 12 months post-stroke (p=0.023). There were no differences between hospital visits. If we took into account the age of patients and the absence or presence of AF in EQ-5D scores, the score lost its significance. VAS adjusted by age and presence of AF average scores were 45.81, 44.15 and 45.74. VAS results showed non-significant differences neither by AF presence nor time.

Table 2. HRQoL.

HRQoL	non-AF		AF		Total patients		p-value
	mean	SD	mean	SD	mean	SD	
EQ-5D score 1st visit	0.61	0.29	0.53	0.34	0.57	0.32	0.029
EQ-5D score 2nd visit	0.67	0.30	0.59	0.30	0.62	0.30	0.111
EQ-5D score 3rd visit	0.69	0.26	0.61	0.30	0.65	0.28	0.023
VAS 1st visit	49.37	23.95	41.53	27.73	45.81	28.61	0.031
VAS 2nd visit	44.22	31.48	44.05	31.78	44.15	31.55	0.966
VAS 3rd visit	46.75	33.32	44.47	33.53	45.74	33.36	0.605

Caregiver mean age was 56 years and mainly female. A total of 34% of caregivers were active workers (**table 3**). The informal caregiver provided 56.07 hours per week in the 2nd visit and 48.58 hours per week in the 3rd visit.

Table 3. Caregiver characteristics.

	non-AF N=138	AF N=118	Total patients N=256	p-value
Age of caregiver (years±SD)	55.22±15.84	57.47±16.69	56.26±16.24	0.27
Female caregiver	70.7%	70.7%	70.7%	1
Husband/wife caregiver	53.2%	41.5%	47.7%	0.061
Active worker caregiver	34.8%	34.1%	34.5%	0.513

Caregiver burden was lower in non-AF than AF patients (**table 4**) (40.9 vs 46.5 2nd visit and 38.7 vs 45.3 3rd visit) and the difference was statistically significant (p=0.007 and p=0.002).

Table 4. Zarit scores.

Zarit score	non-AF		AF		Total patients		p-value
	mean	SD	mean	SD	mean	SD	
score 2nd visit	40.9	16.14	46.5	15.9	43.4	16.2	0.007
score 3rd visit	38.7	14.06	45.3	14.2	41.8	15.9	0.002

CONCLUSIONS

Stroke has an impact on HRQoL patients with no improvement over time[8].

In the same line, stroke patient caregivers burden is high, especially in AF patients.

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