COST OF FOLLOW-UP AFTER A ISCHEMIC CEREBROVASCULAR EVENT IN PATIENTS WITH ATHEROSCLEROTIC CARDIOVASCULAR DISEASE IN SPAIN: RESULTS FROM THE REALITY STUDY

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INTRODUCTION

- Ischemic cerebrovascular events stroke and transient ischemic attack (TIA) are a cause of morbidity and mortality in developed countries and entails a high resources consumption and costs for health systems[1-3].
- These patients have an increased risk of suffering a new event with the consequent additional resource consumption and an increased follow-up cost[4,5].
- In Spain, there is little evidence available on the administration of lipid-lowering treatments in clinical practice and their effectiveness in patients with atherosclerotic cardiovascular disease (ASCVD) and hypercholesterolemia[6].
- Dimensioning the magnitude of ASCVD can help inform decision-making in Health Systems

OBJECTIVE

The aim of this study was to estimate the average annual cost per patient with a new diagnosis or new episode of STROKE and transient ischemic attack (TIA).

METHODS

- A retrospective observational study of the electronic medical records of patients from the BIG-PAC® database (patients from 7 integrated areas of 7 Spanish Regions; n=1.8 million) was carried out.
- Patients with a new/recurrent Ischemic cerebrovascular episode between 1/1/2017 and 12/31/2018 were included.
- Direct healthcare costs (DHCC) were calculated from the consumption of resources during follow-up (two years from diagnosis) and the mean of the Regions official published tariff.
- The indirect non-health costs (INHCC) associated with the loss of productivity were determined.
- All costs were updated to €2021.

RESULTS

- The following figures and tables show: the demographic features and follow-up events (table 1); the resource consumption - hospital admissions and visits (figures 1 & 2) and diagnostic tests (figures 3 & 4); the direct healthcare costs (table 2) and non-healthcare costs (table 3); and a cost summary (table 4).

Table 1. Demographics features and follow-up events

	STROKE	TIA	Total
n	6,388	2,184	8,522
Age (years) (mean [SD])	71.2[11.8]	71.5 [11.2]	
Gender (Male %)	3,405 (53.3%)	1,070 (49%)	4,475 (52.5%)
Follow-up events			
New ASCVD event	1,220 (19.1%)	450 (20.6%)	1,670 (19.5%)
Deaths - n (%)	760 (11.9%)	238 (10.9%)	998 (11.71%)

Figure 1: Resource consumption: Visits (% Patients)

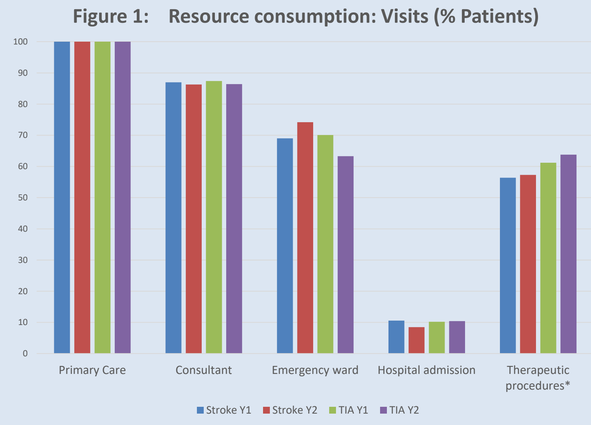


Figure 2: Resource consumption: Visits (average per patient)

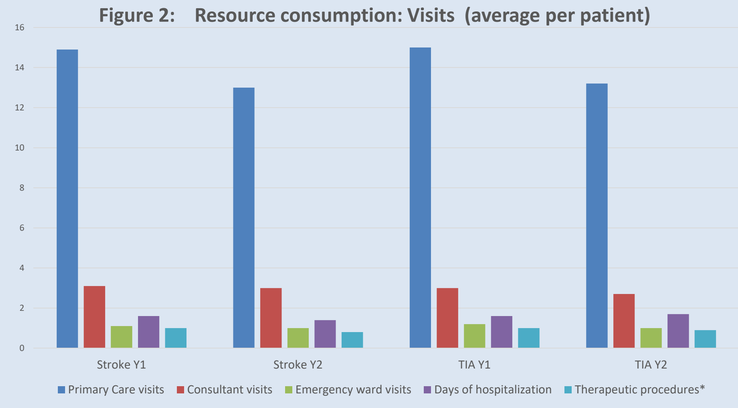


Figure 3: Resource consumption: Diagnostic (% Patients)

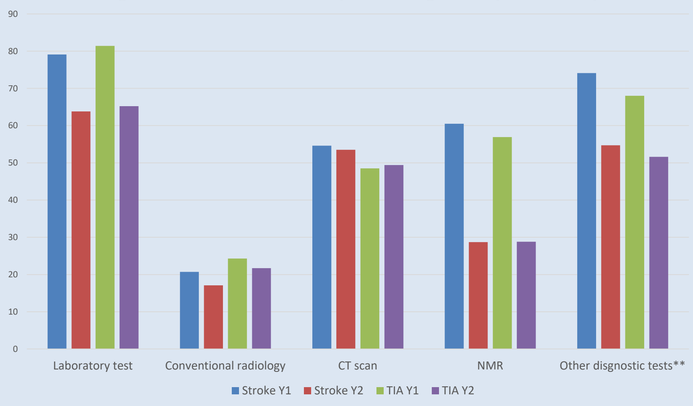


Figure 4: Resource consumption: Diagnostic (average per patient)

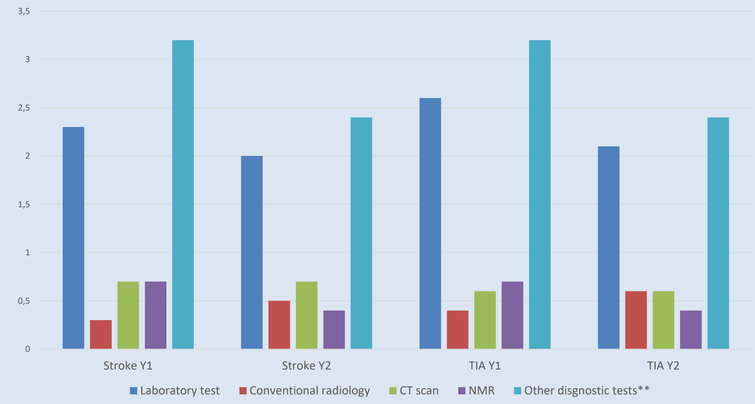


Table 2. Direct healthcare costs (average cost per patient)

	STROKE		TIA	
	Year 1	Year 2	Year 1	Year 2
Average cost per patient	8,778€	7,141€	8,901€	7,644€
Main drivers of cost				
Therapeutic procedures	4,278€	3,699€	4,454€	3,978€
Hospitalizations	1,031€	849€	994€	1,061€
Medication	1,202€	1,005€	1,204€	1,007€

Table 3. Non-healthcare costs (average cost per patient)

	STROKE		TIA	
	Year 1	Year 2	Year 1	Year 2
Sick leave ***	1,147 €	930 €	1,072 €	729 €
Permanent disability****	385€	392 €	265 €	270 €
Premature deaths *****	685 €	622 €	246 €	155 €
Non-healthcare costs	2,217 €	1,944 €	1,583, €	1,154 €

Table 4. Summary of Costs (average cost per patient)

	STROKE		TIA	
	Year 1	Year 2	Year 1	Year 2
Direct Healthcare cost	8,778€	7,141€	8,901€	7,644€
Non-Healthcare cost	2,217€	1,944€	1,583€	1,154€
Average cost per patient	10,995€	9,087€	10,483€	8,798€

Includes coronary artery bypass(percutaneous), angioplasty and endarterectomy/thrombectomy; ** Includes echocardiogram, stress test and cardiac holter; * Sick leave due to temporally disability in the working population (under 65 y.o.); **** Permanent disability in the working population (under 65 y.o.); ******Difference between the age of death and the retirement age in Spain.*

CONCLUSION

Patients with ischemic cerebrovascular disease have a high mortality and represent a considerable social and healthcare cost. Developing preventive programs and controlling cardiovascular risk factors could help reduce mortality and cost for the Spanish National Health System.

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ACKNOWLEDGEMENT This Study was financially supported by Novartis

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