FACTORS ASSOCIATED WITH THE ONSET-TO-DOOR TIME IN ACUTE STROKE IN GUIPÚZCOA (SPAIN)

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BACKGROUND

Acute stroke care in Guipúzcoa is carried out in 3 level II regional hospitals and a single level III hospital with a stroke unit. The objective of this work is to identify factors associated with the onset-to-door time (ODT) in our stroke care model.

METHODS

Observational study from a prospective registry of patients admitted to the stroke unit of a single hospital in the first 24 hours from the stroke onset within a 6-month period of time. Univariate and multivariate analyses were undertaken to identify factors associated to a prehospital delay (ODT >2 hours).

Image. Geographic map of Gipuzkoa with the representation of hospitals and a graphic representation of the distribution of patients according to the place of origin

RESULTS

	ODT >2 h	ODT <2 h	P value	Adjusted P value	Adjusted OR (95% CI)
n	115	82			
Baseline characteristics					
Age, n (%)	70.3 (13.4)	74.1 (13.1)	0.05	0.201	0.971 (0.928-1.016)
Gender female, n (%)	31 (26.9)	18 (21.9)	0.42		
Hypertension, n (%)	70 (60.9)	60 (73.2)	0.072		
Hyperlipidemia, n (%)	57 (50.0)	32 (40.0)	0.169		
Diabetes, n (%)	37(32.1)	18 (21.9)	0.115		
Current smoker (n=125), n (%)	23/71 (32.4)	8/54 (14.8)	0.024	0.011	6.976 (1.564-31.119)
Alcohol (n=115), n (%)	16/69 (23.1)	9/46 (19.6)	0.644		
Previous stroke, n (%)	14 (12.4)	16 (20.0)	0.151		
Known AF, n (%)	17 (14.8)	25 (30.5)	0.008	0.759	0.806 (0.202-3.206)
Previous mRS, median (IQR)	0 (0-1)	1 (1-2)	0.001	0.078	1.836 (0.935-3.607)
Ischemic heart disease, n (%)	12 (10.4)	8 (9.7)	0.876		
Living alone, n (%)	12 (17.1)	9 (13.8)	0.597		
Geographical factors					
Distance to level III hospital in Km, mean (SD)	24.1 (19.5)	16.5 (15.4)	0.003	0.203	0.980 (0.950-1.011)
Previous level II hospital, n (%)	47 (40.9)	8 (9.7)	<0.001	0.032	4.891 (1.146-20.868)
Own means transportation, n (%)	34 (29.6)	9 (11.0)	0.002	0.003	6.771 (1.909-24.023)
Stroke data					
Awakening stroke, n (%)	27 (23.7)	29 (35.4)	0.068		
Onset NIHSS, mean (SD)	3.9 (4.2)	10.1 (6.9)	<0.001	0.003	1.156 (1.051-1.271)
Dizziness as onset symptom, n (%)	32 (29.1)	7 (8.6)	0.001	0.011	8.165 (1.621-41.134)
Type of stroke					
Ischemic stroke, n (%)	88 (76.5)	64 (78.0)	0.960		
TIA, n (%)	20 (17.4)	7 (8.5)	0.075		
Haemorrhagic stroke, n (%)	7 (6.1)	11 (13.4)	0.078		

Table. Univariate and multivariate analysis of predictors to prolonged prehospital time with ODT >2hours as dependent variable. IQR: interquartile range. SD: standard deviation.

CONCLUSION

Smoking, to be transported by own means, previous transfer to a level II hospital, dizziness as a first symptom and stroke severity were associated with ODT. Transfer system modifications and community strategies to improve awareness of early and atypical symptoms of stroke are expected to help shorten ODT in acute stroke patients in our region.