TIME IS BRAIN FOR THOSE NOT RECEIVING REPERFUSION THERAPIES, EVEN 1 YEAR AFTER STROKE.

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INTRODUCTION

Thrombolysis and thrombectomy are therapies with a proven time-dependent benefit on survival and functionality of stroke patients. A benefit in reducing prehospital delay for those who don't receive such therapies has rarely been studied. We conducted a study to investigate if a sooner hospital arrival (PD < 3 hours) favors functional independency (mRS < 2) 12 months after a stroke.

METHODS

284 Patients with acute stroke (TIA excluded) who didn't receive thrombolysis nor thrombectomy were prospectively included. Sociodemographic factors, premorbid conditions, and clinical, biochemical and hematological parameters that were considered as possible prognostic factors were collected, as well as data on PD. Multivariate logistic regression analyses were conducted to identify factors related to achieving functional independency three months after stroke.

RESULTS

Table 1. Sample Characteristics

Variable	Total (n=284)	PD <180' (n=120)	PD>180' (n=164)	p
Age (Mean;y)	73,90	73,49	74,29	ns
Sex (Male;%)	54,2	52,2	56,1	ns
TIA (%)	19,1	22,0	16,3	ns
Etiology (%)				
Atherothrombotic	13,4	12,4	14,3	0,001
Cardioembolic	24,9	30,6	19,4	
Lacunar	23,3	17,7	28,6	
Other	6,5	9,1	4,1	
Undetermined	20,7	17,2	24,0	
Haemorrhagic	11,3	12,9	9,7	
OCSF (%)				
TACI	12,3	18,8	6,1	<0,001
Previous mRS≤2	79,3	80,6	78,1	ns
NIHSS (Mean)	5,64	7,78	3,61	ns
Hypertension (%)	74,61	76,88	72,45	ns
Diabetes Mellitus (%)	36,13	36,56	35,71	ns
Dyslipidemia (%)	42,93	44,09	41,84	ns
Atrial Fibrillation (%)	15,70	20,43	11,22	ns
Ischemic Heart Disease (%)	15,18	16,67	13,77	ns
Hemoglobin (Mean;g/dL)	13,84	13,87	13,82	0,761
Albumin (Mean;mg/dL)	3,93	3,95	3,91	0,413

Table 2. Prognostic factors for independency 1 year after stroke

Variable	OR	IC 95%	P
PD ≤ 180	4,155	1,435 – 12,033	0,009
Sex (Male)	2,907	1,102 – 7,690	0,031
Uric Acid	1.010	10.001 – 1.019	0,043
Onset NIHSS	0,832	0,752 – 0,919	<0,001
PreviousmRS	0,286	0,189 – 0,433	< 0,001
Hb A1c > 6,5	0,190	0,064 – 0,568	0,003
Infectious comorbidity	0,037	0,006 – 0,249	0,001

Figure 1. Previous mRS

Figure 2. Onset mRS

Figure 3. mRS at discharge

Figure 4. mRS 12 months after onset

BIBLIOGRAPHY

Among patients not receiving reperfusion therapies, the chance of achieving functional independency is clearly higher for those arriving the hospital in the first three hours after stroke onset. Great efforts should be done in the future to increase the number of patients attended in the first three hours after the setting of stroke, in order to minimize the personal, social and economic burden of stroke.

BIBLIOGRAPHY

1. Hacke W, Donnan G, Fieschi C, Kaste M, von Kummer R, Broderick JP, et al. Association of outcome with early stroke treatment: pooled analysis of ATLANTIS, ECASS, and NINDS rt-PA stroke trials. Lancet. 2004;363(9411):768–74.
2. Davalos A, Castillo J, Martinez-Vila E. Delay in neurological attention and stroke outcome. Cerebrovascular Diseases Study Group of the Spanish Society of Neurology. Stroke. 1995;26(12):2233–7. Kimura Y, Yamada M, Itagaki A, Qureshi AI, Kirmani JF, Sayed MA, Safdar A, Ahmed S, Ferguson R, et al. Time to hospital arrival, use of thrombolytics, and in-hospital outcomes in ischemic stroke. Neurology. 2005;64(12):2115–20.
3. Naganuma M, Toyoda K, Nonogi H, Yokota C, Koga M, Yokoyama H, et al. Early hospital arrival improves outcome at discharge in ischemic but not hemorrhagic stroke: A prospective multicenter study. Cerebrovasc Dis. 2009;28(1):33–8.
4. Denti L, Artoni A, Scoditti U, Gatti E, Bussolati C, Ceda GP. Pre-hospital Delay as Determinant of Ischemic Stroke Outcome in an Italian Cohort of Patients Not Receiving Thrombolysis. J Stroke Cerebrovasc Dis. 2016;25(6):1458–66.