Factors of progression in lacunar infarcts: can we improve their outcome?

S. Bashir Viturro, Y. Silva Blas, M. Terceño Izaga, L. Pardo Albiñana, M. Reina Garrido, C. Gubern Merida, J. Serena Leal.
Stroke Unit. University Hospital of Girona. Clinical Neurovascular Research Laboratory. IDIBGI, Department of Neurology, Girona, Spain.

Background :

Although, a priori, lacunar infarcts have a favorable prognosis, up to 20-30% of patients may progress in the following days, significantly worsening functional prognosis. The objective is to determine factors of progression of LI and to establish whether treatment with intravenous fibrinolysis (tPA) may prevent clinical progression.

Methods:

Retrospective study of patients with lacunar infarcts admitted to our center. Neurological deterioration was defined as worsening of >1 point in the NIHSS motor item. We compared demographic characteristics, progression factors and prognosis of patients who had a progressive lacunar infarct with those who did not. The incidence of progressive lacunar infarct was studied in patients who received tPA.

Results:

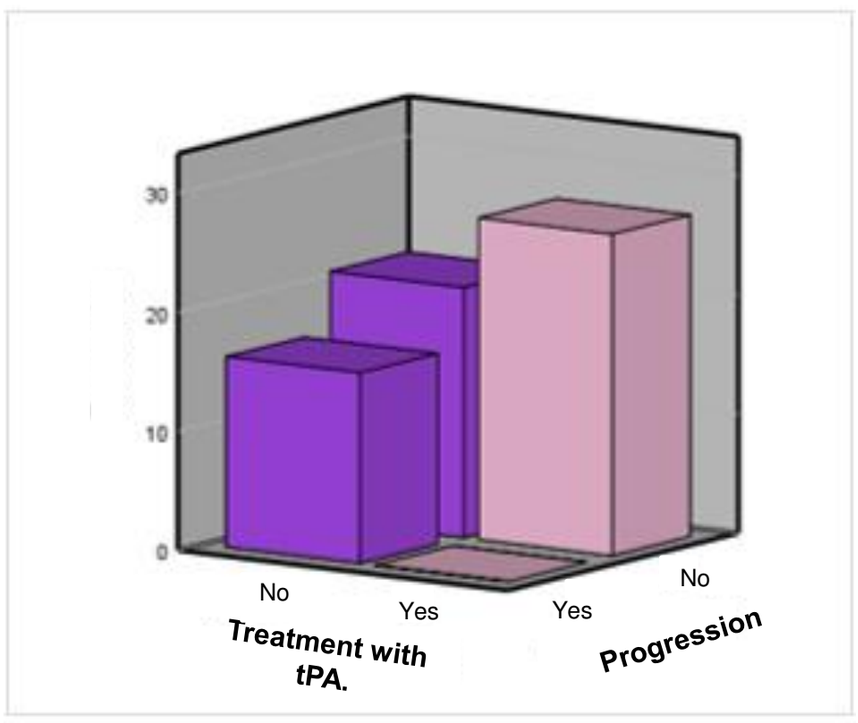
We identified 63 patients with lacunar infarct of which 17 had progressive symptoms.

Patients with progressive lacunar infarct had statistically significant:

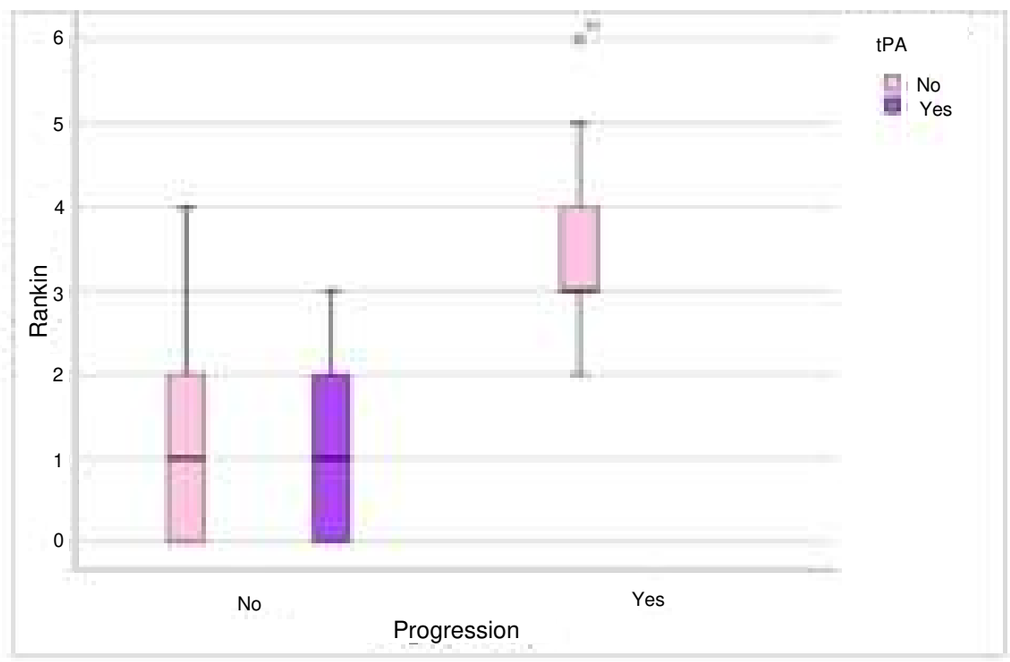
- Greater decrease in blood pressure in the first 24 hours (p: 0.003)
- Higher glycemia at 24 hours (p: 0.01)
- Greater glycemic increase in the first 24 hours (p: 0.02).

	No progression	Progression
Glycemia 24 h	134,5 mg/dL	191,4 mg/dL
Glycemia increase	12,8 mg/dL	55,77 mg/dL
Blood pressure decrease	27,2 mmHg	53 mmHg
NIHSS	2,5	6,5

Of those patients with lacunar infarct treated with tPA (27 patients), none presented clinical progression.



Progressive infarcts were associated with greater functional dependence at three months (Rankin 3 vs 1, p: 0.01)



Conclusions:

Progressive lacunar infarcts imply a persistent and significant functional worsening. The adequate control of glycemia and blood pressure in the first 24 hours is crucial. Although lacunar infarcts are supposed to have a good prognosis, it may be reasonable to offer an aggressive treatment with tPA even in patients with low NIHSS, since it may prevent the progression of symptoms and offer a better functional outcome.

Hospital Universitari de Girona Doctor Josep Trueta
InstitutCatalàdelaSalut

IdIBGi Institut d'Investigació Biomèdica de Girona Dr. Josep Trueta

Stroke Unit
HU Josep Trueta - Girona