Is there a smoking paradox in acute ischemic stroke angiographic recanalization?

Rita Gameiro1, Yasmin Mamade1, Carolina Pinheiro2, Catarina Perry da Câmara2, Sofia Galego3, Patrícia Ferreira3, and Ana Paiva Nunes3

From the Lisbon Stroke Summit, Lisbon, Portugal. 7–8 April 2017.

Abstract

Background: The smoking paradox is a controversial phenomenon that refers to an unexpected better outcome in smokers eligible for thrombolytic treatment. Recent studies suggest that current smokers have better recanalization rates after thrombolysis with the recombinant tissue plasminogen activator (rt-PA). However, there is no literature regarding the effect of smoking on revascularization rates after mechanical thrombectomy.

Objectives: We investigated the association of smoking with successful revascularization in patients with large vessel occlusion treated with mechanical thrombectomy.

Methods: We included 208 of 213 patients with acute ischemic stroke submitted to mechanical thrombectomy during a one-year period. Recanalization rate was defined as a score superior to 2b in the thrombolysis in cerebral infarction (TICI) scale, after endovascular therapy. Smokers were defined according to active or previous smoking habits.

Results: Among 208 patients, 14 were smokers (n=29). Smokers were younger (median, 59 years versus 73 years; P=0.08), more often men (83 versus 42; P<0.001) and had a higher prevalence of coronary disease (59 versus 11; P<0.01). Smoking status was not associated with different arterial occlusion sites (P=0.141). Smoking did not improve recanalization rates after mechanical thrombectomy (93 versus 87; P=0.55).

Conclusions: Smoking does not appear to cause better recanalization rates in patients submitted to endovascular therapy. Because of the small numbers, these results need to be validated at a bigger scale.