Carotid Angioplasty In Octogenarians: A Mono-Arm Trial With Clinical And Angiographic Follow Up

Ehsan Sharifipour¹, Reza Mohammadian²

¹Neurology Department, Neurology and Neurosciences Research Center, Qum University of Medical Sciences, Qum, Iran.
²Neuroscience Research Center, Tabriz University of Medical Sciences, Tabriz, Iran.

Background: Octogenarians account for a third of ischemic stroke (IS) patients and they have higher morbidity and mortality rate among IS patients. The aim of this study was to evaluate the peri-procedural and long term clinical and angiographic statement of carotid artery angioplasty (CAA) in octogenarians.

Methods: In a mono-arm trial 102 patients > 80 years old with symptomatic internal carotid artery (ICA) stenosis presented by non-disabling IS or TIA underwent the CAA and were evaluated prospectively from January 2010 to July 2014. All patients had standard stroke care during the study follow up. The peri-procedural complications, cerebrovascular accidents, restenosis in target vessel and mortality rate were recorded to evaluate safety and durability of this secondary stroke prevention method in octogenarians.

Results: 48 (47.06%) males and 54 (52.9%) females in a mean period of 24.5±14.1 (6-50 months) were followed. For all patients mean age was 83.39 ±2.53 (range, 80-88) years. The success rate of CAA was 100%, whereas the peri-procedural complication rate was 5.8% (access-site local hematoma and bradycardia during CAA both in 2.94%). There was only one patient who had acute ischemic stroke during the procedure. Restenosis occurred in 3.9% after a mean of 21.5 months. The proportion of recurrent cerebrovascular accident was 9.8% while TIA occurred in 3.9% and stroke in 1% of patients. Also 4.9% of patients experienced coronary artery disease and the proportion of fatal recurrent cerebrovascular accident was 2.9%. The median patient event-free survival was 20 months.

Conclusion: CAA seems to be a safe and durable IS secondary prevention method in octogenarians with symptomatic carotid artery stenosis.

Key words: Octogenarian; symptomatic carotid artery stenosis; carotid artery Angioplasty