Case Report

Open Access

CrossMark

Successful thrombolysis in stroke for the elderly, a perspective beyond guidelines

Volume 14 Issue 1 - 2024

Rodrigo Vazquez-Sánchez,[1] Nancy Gabriela Rodríguez Murillo,[1] Dulce María Bonifacio Delgadillo[2]

[1]Resident Doctor in Emergency Medicine of the Emergency Service of the "Darío Fernández Fierro" General Hospital of the Institute of Security and Social Services of State Workers, Mexico

[2]Specialist in Neurological Endovascular Therapy assigned to the Neurology service of the National Medical Center "November 20" of the Institute of Security and Social Services of State Workers, Mexico

Correspondence: Rodrigo Vazquez Sánchez, Hospital General "Dr. Darío Fernández Fierro"–Servicio de Urgencias, Av. Revolución 1182, Col. San José Insurgentes, Alcaldía Benito Juárez, CP: 03900, Tel 5520872616, Email drvazquezmc@outlook.com

Received: February 25, 2024 | **Published:** March 07, 2024

Introduction

Cerebral infarction is one of the major causes of disability worldwide, with an estimated 9.5 million events worldwide, estimating a presentation of 1 in 4 adults in their lifetime, with a high rate of disability worldwide, with a great economic impact due to the high survival rate.[1] The presentation in patients older than 85 years is high, however, with a currently very low treatment rate, which has economic repercussions on the quality of life of patients and their support network. The current stroke management guidelines of the European Stroke Society consider the management of patients over 85 years of age to be extraordinary, and the criteria for management are very limited.[2] We present the case of a patient at the end of life with severe stroke who underwent management by extended thrombolysis with good results and was taken to our unit.

Case presentation

The patient is a 90-year-old female with a history of arterial hypertension and diabetes mellitus, as well as previous cerebral infarction with sequelae only dysarthria classified in the Rankin scale of disability as Class 2. His condition begins with neurological deficit witnessed by relatives 4 hours before his admission around 12:45 hrs, which is characterized by aphasia and right facial-body hemiparesis that does not recover spontaneously, coming to our unit, arriving at our service at 17:40 hrs where he is approached in resuscitation area with suspicion of acute ischemic stroke. Relevant initial vital signs Blood pressure 190/86, the rest without alterations. Neurological examination was performed giving a NIHSS scale score of 25 due to right facial-body hemiparesis, global aphasia, deviation of the conjugate gaze to the left, decreased sensitivity of the right hemibody and bitemporal hemianopsia. It is diagnosed as a hemispheric dominant neurovascular syndrome with a RACE scale of 7 points with high suspicion of large vessel occlusion.

Approach

With the diagnostic suspicion and in accordance with management guidelines,[2] a simple cranial tomography was performed without observing hemorrhage, an ASPECTS of 9 points was calculated secondary to hypodensity in M6 known by previous infarction, there were no other hyperacute data. Blood pressure is addressed since it remains outside treatment goals with hydralazine 5 mgs, with improvement in blood pressure.

Treatment

Due to evolution time >4.5 hours, it was decided to activate the ResISSSTE network for stroke management, and she was referred for advanced imaging studies. Angiotomography was performed with apparent acute occlusion of M1 post-bifurcation, with collaterality grade 2 (Figure 1), advanced perfusion study with Mismatch of 1.6, penumbra zone 21.97 cm^3, infarct zone 13.76 cm^3 (Figure 2) fulfilling EXTEND criteria for thrombolysis in extended window.[3] Treatment was performed with Tenecteplase at a weighted dose of 0.25 mg/kg with a total dose of 2.2mgs in a single bolus, according to the EXTEND-IA TNK3[4] study, calculating a Dragon Score of 7 points and a SEDAN Score of 2 points with low risk for post-thrombolysis hemorrhage.

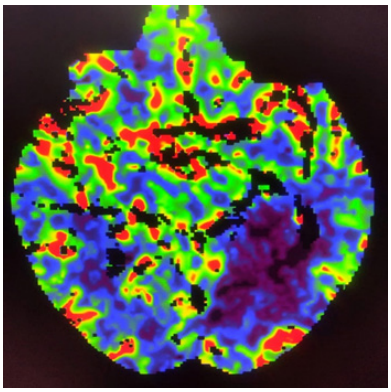

Figure 1 Diffusion sequence image in axial section with infarct area in MCA M1 territory.

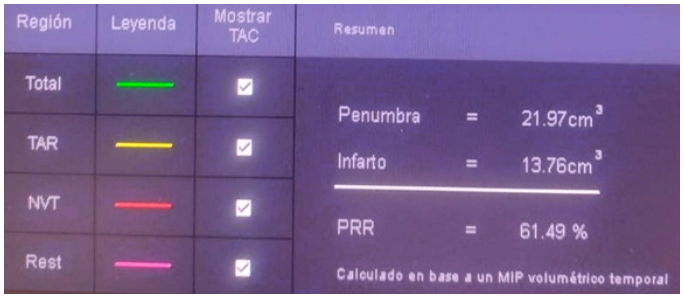

Figure 2 RAPID program results with diffusion sequence, showing Penumbra and Core.

Outcome and follow-up

Patient admitted to intensive care for post-thrombolysis care without secondary hemorrhage, evolving adequately with recovery of NIHSS function of 10 points, currently with a Modified Rankin Scale of 3 points.

Discussion

According to what has been presented, we consider that age barriers in patients with major stroke are not a determinant for the pharmacoinvasive therapeutic approach, being that the recognition and adequate stratification in the emergency department was key for the management of this patient, It is necessary to extend the new criteria for therapeutic approach in our emergency rooms to manage our patients >85 years old, who are still outside the scope of the management guidelines.

Patient perspective

The modified Rankin scale gives us a perspective on the pre- and post-disability of a patient with ischemic stroke,[5] age is not a determinant for access to pharmacoinvasive therapies in the treatment of stroke, with this success story being of importance to obviate those barriers with respect to stroke management in patients with NIHSS greater than 20 or age greater than 85 years.

Acknowledgments

I thank my teachers for providing me with the support and experience to expand my knowledge in this specialty of ours, as well as the nursing staff and all the support staff in our institution for the timely management of our patients. Finally, I thank my parents and brother who were the greatest pillar and the greatest source of inspiration for the achievements I have obtained.

Funding

The authors of this case report declare that no funding is available.

Conflicts of interest

The authors of this case report declare that they have no conflict of interest.

References

1. Feigin VL, Nguyen G, Cercy K, et al. Global, Regional, and Country-Specific Lifetime Risks of Stroke, 1990 and 2016. *N Engl J Med*. 2018;379(25):2429–2437.
2. Berge E, Whiteley W, Audebert H, et. Al. European Stroke Organisation (ESO) guidelines on intravenous thrombolysis for acute ischaemic stroke. *Eur Stroke J*. 2021;6(1):I–LXII.
3. Ma H, Campbell BCV, Parsons MW, et. al. Thrombolysis Guided by Perfusion Imaging up to 9 Hours after Onset of Stroke. *N Engl J Med*. 2019;380(19):1795–1803.
4. Campbell BCV, Mitchell PJ, Churilov L, et. al. Tenecteplase versus Alteplase before Thrombectomy for Ischemic Stroke. *N Engl J Med*. 2018;378(17):1573–1582.
5. Quinn TJ, Dawson J, Walters MR, et al. Reliability of the modified Rankin Scale: a systematic review. *Stroke*. 2009;40(10):3393–3395.

Citation: Vazquez-Sánchez R, Murillo NGR, Delgadillo DMB. Successful thrombolysis in stroke for the elderly, a perspective beyond guidelines. *MOJ Med Clin Case Rep*. 2024;14(1):16–17. DOI: 10.15406/mojcr.2024.14.00452