



ORAL PRESENTATION

Acute phase treatment in central retinal artery occlusion: hyperbaric oxygen therapy, thrombolysis or even both?

Daniel Ferreira¹, Carolina Soares^{1,2}, João Tavares-Ferreira³, Tiago Fernandes⁴, Rui Araújo^{1,2}, and Pedro Castro^{1,2,5}

From the Lisbon Stroke Summit, Lisbon, Portugal. 5–6 April 2019.

Abstract

Background: Central retinal artery occlusion (CRAO) is a neuro-ophthalmological emergency. Evidence shows a finite time window for acute interventions aimed at retinal sparing. No guideline-endorsed evidence for acute treatment is available with current options including revascularization (e.g. intravenous thrombolysis - IVT) and retinal oxygenation (e.g. hyperbaric oxygen therapy - HBOT) therapies.

Objective: We report a 3-case series of patients with a CRAO who underwent acute phase treatment with either HBOT, IVT or combined IVT and HBOT.

Clinical cases: Case 1: A 35-year-old female presented with an acute visual loss in her right eye (OD). Fluorescein angiography (FA) and optical coherence tomography (OCT) revealed CRAO. She was submitted to 3 sessions of HBOT (100% O₂ at 2.4 atmosphere absolute-ATA), discontinued after a barotrauma of the middle ear. Visual defects on the

nasal field were kept afterwards but visual acuity (VA) improved from counting fingers to 1.0 in the remaining fields. Case 2: A 65-year-old male presented with CRAO in his left eye (OS), with 3 hours of evolution. He underwent IVT with tPA (0.9mg/kg). Orbital sonography, FA and OCT confirmed the presence of an embolus and retinal ischemia. VA improved from light perception to 0.1. Case 3: A 21-year-old male showed acute visual loss in his OD with 3 hours of evolution. OCT and retinography identified CRAO. The patient was submitted to IVT (tPA-0.9mg/kg) followed by 12 sessions of HBOT (2.4 ATA). After 6 days, VA improved from hand motion to 0.4.

Conclusion: Our case series illustrates the different options and possible outcomes in acute management of a rare, but highly morbid, cerebrovascular disorder. Future clinical trials are warranted to tackle current difficulties in CRAO treatment.

¹Department of Neurology, Centro Hospitalar Universitário de São João, EPE, Porto

²Department of Clinic Neurosciences and Mental Health, Medical Faculty of Porto University, Porto

³Department of Ophthalmology, Centro Hospitalar Universitário de São João, EPE, Porto

⁴Hyperbaric Medicine Unit, Unidade Local de Saúde de Matosinhos, Porto

⁵Stroke Unit and Neurology Department, Centro Hospitalar Universitário de São João, EPE, Porto

Citation: Ferreira et al. Acute phase treatment in central retinal artery occlusion: hyperbaric oxygen therapy, thrombolysis or even both?. International Journal of Clinical Neurosciences and Mental Health 2019; 6(Suppl. 1):O5

Published: 04 April 2019



Open Access Publication Available at <http://ijcnmh.arc-publishing.org>

© 2019 Ferreira et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

