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OPTIC NEUROPATHY: RETROSPECTIVE OBSERVATIONAL STUDY AND DIAGNOSIS CHANGE DURING PATIENTS FOLLOW-UP

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Introduction: Optic neuropathies (ON) have several aetiologies and sometimes the diagnosis established ab initio is redefined after further investigations and/or new neurological events. The aimof this study was to identify possible predictive factors that may dictate that diagnostic change during follow-up. A second arm of this study is still ongoing, and aims to search new biomarkers for ON, with special interest in optic neuritis. Important attention will be given to the eye's posterior pole findings using Spectral-Domain Optical Coherence Tomography and OCT Angiography. We intend to study these parameters as potential structural biomarkers that could improve the sensitivity and specificity predicting the treatment response and to determine its prognostic value at the acute phase of optic neuritis.

Methods: We retrospectively reviewed the medical records of 156 patients with ON admitted to the ward of our Neurology Department, between January 2004 and August 2019. Clinical, laboratory and imaging data, as well as treatment protocols and follow-up were analyzed. The second arm will feature a descriptive analysis of every patient diagnosed with optic neuritis from January 2004 and August 2020 and followed in our center until date. A single ophthalmologic evaluation of those patients will include all visual function tests and optic imaging structural evaluation.

Results: At the time of discharge from the ward, our cohort comprised 83 idiopathic ON (53.2%), 38 multiple sclerosis-related ON (24.4%), 23 ischemic ON (14.7%), 5 neuromyelitis optica spectrum disorder-related ON (3.2%), and 7 with other diagnoses (4.5%). During follow-up, 129 patients retained the ward's discharge diagnosis (82.7%) while in 27 it was redefined (17.3%). The median time between admission and change in diagnosis was 12.3 (5.4 - 42.9) months. Multivariate Cox regression analysis demonstrated that the patients with atypical optic neuropathy (presence of one of these clinical findings: bilateral eye involvement, visual acuity <= 0.1 at admission, worsening or non-substantial recovery of visual acuity during hospitalization) had lower risk of having the initial diagnosis changed (HR = 0.320, 95% CI = 0.138–0.743, p =0.008).

Conclusion: Our study illustrates that some patients admitted with ON may have their diagnosis redefined during follow-up. Furthermore, it demonstrates that patients with atypical ON are those in which the diagnosis is more likely to remain during follow-up. In regards to the current arm of the study, further evaluation is needed in order to validate our results.

Biography

Sofia Bezerra is Medical Doctor, graduated at School of Medicine of Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre/Brazil. She has multicultural background, and values highly a good medical practice and integrative research. Her career reflects the multidisciplinary curriculum that has characterized her academic and experimental profile, having studied in Germany and UK. In 2016, she has applied for the Equivalence of Academic Degree at School of Medicine of University of Lisbon, Portugal, which has been successfully completed. Currently, she is at International Doctoral Program in Neuroscience, in Faculty of Medicine, University of Porto, as research collaborator and under supervision of Professor Doctor Joana Guimarães, with main interest in Optic Neuropathies. Her project aims to provide objective biomarkers that could be used to predict the treatment and its response.