

Systemic corticosteroid therapy and visual outcome of Ischemic Optic Neuropathy

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BACKGROUND: Non-arteritic anterior ischemic optic neuropathy (NA-AION) is one of the major causes of impaired vision, with sudden visual loss with ipsilateral optic disk edema. Systemic corticosteroids have been widely used in the treatment of optic neuropathies (ON), but in regards to NA-AION, its management is still controversial.

OBJECTIVES: We propose to review retrospectively all patients with NA-AION of our Neurology Department, and evaluate visual outcomes after systemic intravenous corticosteroid therapy in acute phase.

METHODS: We reviewed retrospectively all patients who received intravenous methylprednisolone (IVMP) admitted to the ward of our Neurology Department, between July 2010 and July 2021. All patients had been treated with high doses of intravenous methylprednisolone (IVMP) during the acute phase, and are currently on follow-up with our center. Main exclusion criteria were pre-existing ocular abnormalities that might affect assessment of visual function. Forty-six patients were included in the study. Visual evaluation was performed with Snellen's chart at the admission, discharge and 6 months of follow-up.

RESULTS

Our cohort comprised 45 patients. Median age at the event was 67.3 years. All, except one patient, had at least one known vascular risk factor. The median time of treatment was 4.0 ± 1.7 days during hospitalization. At diagnosis, diffuse optic disc swelling was the most common pattern of optic disc edema. Differences in visual acuity (VA) were assessed at initial, discharge and follow-up (6 months). The initial VA of affected eye in 32 patients was 20/70 or worse. Out of these, 28.1% presented median 3-line improvement on the Snellen chart after IVMP therapy. In 15%, VA worsened median 2 Snellen lines, and 56% remained stable. (Mann-Whitney, $p = 0.29$).

CONCLUSION: Despite small number of patients, which is the main limitation of our study, some patients with moderate low vision could be benefited from the use of IVMP therapy when given during acute phase of NAION.