Radiation Induced Optic Neuritis: A Role for Steroids?

Kevin Leikert  
*Henry Ford Health System*

Daniel Brill  
*Henry Ford Health System*

Poonam Bansal  
*Henry Ford Health System*

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Radiation Induced Optic Neuropathy: A Role for Steroids?
Kevin Leikert DO, Dan Brill MD, Poonam Bansal MD - Department of Ophthalmology
Henry Ford Health System, Detroit, Michigan

Introduction: Radiation induced optic neuropathy is a devastating complication of radiotherapy to the anterior visual pathway, resulting in significant, permanent vision loss. Patients who have received radiation treatment to the region close to the eye(s) can be at risk for this complication. The aim of this study was to evaluate the role of systemic corticosteroids for the treatment of radiation induced optic neuropathy (RION).

Background: RION is a devastation complication of radiation treatment to the brain or face. This study focused on patients who were treated for squamous cell carcinoma of the face. Ophthalmologic examination and MRI showed findings consistent with radiation induced optic neuropathy. The patient was treated with high dose IV corticosteroids followed by an oral taper. The patient’s baseline vision in the right eye was 20/20 prior to the event. On the initial presentation the patient’s visual acuity had decreased to 20/400, and two months later was measured to be 20/50. High dose corticosteroids may play a role in the treatment of radiation induced optic neuropathy.

Methods: This was a retrospective review of 73 patients treated for radiation induced optic neuropathy at a single institution. The patients were divided into two groups: those who received high dose corticosteroids and those who did not. The results were compared to evaluate the efficacy of corticosteroids in treating RION.

Results: Of the 73 patients reviewed, 38 had received high dose corticosteroids. Of these, 35 showed no benefit from treatment. The remaining 38 patients who did not receive corticosteroids showed no signs of benefit from treatment. Elevated BUN was found to be significantly related to a greater response to treatment. The patient in this case had a BUN of 21 at the time of presentation.

Discussion: Radiation therapy is a widely utilized therapy for treatment of many cancers of the skin and treated patients with nasopharyngeal carcinoma. Support Care Cancer. 2019 Mar 5.

Conclusions: Radiation induced optic neuropathy is a devastating complication of radiation treatment to the brain or face. Patients who have received radiation treatment to the region close to the eye(s) can be at risk for this complication. There is no clear intervention that has been shown to halt or reverse the vision loss in patients with RION. Further research in this area is needed to determine the efficacy of corticosteroids in treating RION.

References: