Original Research Article

Clinical outcome of macula involved serpiginuos choroiditis cases with intravenous methyl prednisolone

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Abstract

Clinical Outcome of macula involved serpiginuos choroiditis cases with intravenous methyl prednisolone. Retrospectively 40 eyes of 33 patients of serpiginous choroiditis with macular involvement treated with 1gm/day intravenous methyl-prednisolone for 3 consecutive days,followed by oral steroids and Azathioprin in the tapering dosage. On first follow-up after one week of IVMP therapy, all cases showed clinical evidence of inactivity. Thirty-three (82.5%) showed improved visual acuity ,6(15%) maintained the vision while only one deteriorated by one snellen's line. Four patients develop recurrence during follow up, out of which one patient had two episodes of recurrence, which was treated by adding cyclosporine instead of Azathioprin. We reported use of IVMP with azathioprine without any serious side effect and was also very effective in early visual recovery and controlling inflammation. We recommend use of intravenous methyl prednisolone as an initial therapy in serpiginous choroiditis with macular involvement.

Key Words: macula, serpiginuos choroiditis.

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Email: drgirish11@yahoo.co.in
Received Date: 03/05/2017 Revised Date: 17/06/2017 Accepted Date: 05/07/2017
DOI: https://doi.org/10.26611/1009316

Access this article online	
Quick Response Code:	Website: www.medpulse.in
	Accessed Date: 14 July 2017

INTRODUCTION

Serpiginous choroiditis is a bilateral, progressive choroiditis of unknown origin leading to loss of choriocapillaries and atrophy of overlying retinal pigment epithelium, usually begins in peripapillary region and extends in an irregular serpentine fashion to the midperiphery, with remissions and exacerbations resulting in chorioretinal scarring. Visual loss is usually due to involvement of fovea. Which is often irreversible if untreated. Recently many authors reported macular variant of serpiginous choroiditis, which extends peripherally and towards disc.[1] Diffuse and focal infiltrates of lymphocytes in the choroids, particularly at the margin of serpigenous lesion, suggesting an inflammatory component to the disease. Therefore, anti-inflammatory and immunosuppressive therapies have been used in the treatment of this condition. Intravenous methyl-prednisolone is potent anti-inflammatory and immunosupressent widely used in many vision treatening ocular inflammatory disorder. We report the successful treatment and early visual improvement in macula involved serpiginous choroiditis with intravenous methyl prednisolone (IVMP) and tapering dosages of oral prednosolone with or without oral immunosuppressive agent.

MATERIAL AND METHODS

Retrospectively 40 eyes of 33 patients of serpiginous choroiditis with macular involvement from Jan 2014 to Jan 2016. All patients had ophthalmoscopic and angiographic evidence of active choroidal inflammation.

How to cite this article: Girish Gadre, B S Joshi, D K Sindal. Clinical outcome of macula involved serpiginuos choroiditis cases with intravenous methyl prednisolone. *MedPulse International Journal of Ophthalmology.* July 2017; 3(1): 23-25. https://www.medpulse.in/Ophthlmology/ (accessed 14 July 2017).

All patients had macular involvement as a initial presentation or centrifugal spread from peripheral lesions. All patients were treated with 1gm/day intravenous methyl-prednisolone for 3 consecutive days in an Intensive care unit, followed by oral sterois in the dosages of 1mg/ kg body weight for 2 weeks and Azathioprin in the dosage of 1.5 – 2 mg/kg/day and than tapered as per response. Before starting IVMP, all patients underwent detail medical check-up with baseline blood pressure, ECG, Blood sugar, Blood counts and admitted for observation. All patients underwent regular monitoring of blood counts every 2 weeks and serum chemistry every 3 months. Demographic features of patients, visual acuity at presentation and previous treatment were noted. In the follow-up period, information was collected on the recurrence of inflammation. Final Visual acuity and side effects attributable to IVMP and Chemotherapy were noted.

RESULTS

Table 1:

Visual Acuity	Pre-IVMP	First follow up	Final follow up
>6/9	12	22	30
6/12 to 6/18	10	7	3
6/24 to 6/36	5	2	1
6/60 to 3/60	4	7	5
< 3/60	9	2	1
Total	**40**	**40**	**40**

Mean age of presentation was 33.9 years, with male to female ratio of 5.3. Average follow up of 7.3 months (range -3 to 36 months), Twenty seven (67.2%) bilateral out treous of which 8(25%) were macular serpigenous choroiditis cases. Thirty-three (82.5%) showed vitreous cells, 19(47.5%) showed anterior segment reaction. Fourteen (35%) presented first time for the ocular problem, while rest of others diagnosed elsewhere and referred to our hospital for further management. On first follow-up after one week of IVMP therapy, all cases showed clinical evidence of inactivity. Thirty-three (82.5%) showed improved visual acuity, 6(15%) maintained the vision while only one deteriorated by one snellen's line. Eight (25%) patients improved snellen's visual acuity by 6 lines. Four patients develop recurrence during follow up, out of which one patient had two episodes of recurrence, which was treated by adding cyclosporine instead of Azathioprin. All recurrence cases had bilateral extramacular initial presentation. Seventeen patients had more than 6 months follow-up without recurrence. All patients received Azathioprine as a immunosuppressive except one who was intolerant to azathiprine and switch over to methotrexate. One patient received cyclosporine after recurrence. No patients reported with any specific symptoms, which needs to stop steroids or immunosuppressive agent. Three patients were newly diagnosed diabetic during period of follow up, which needs modification in steroids dosages. Most common complaints which patients reported after 4 to 5 weeks is insomnia, weight gain. No patient during the period of IVMP therapy reported any complaints and during continuous monitoring no patient had any cardiac or other systemic problem requiring intervention.

DISCUSSION

Intravenous methyl prednisolone is now an an accepted modality of treatment in other branches of medicine. Such treatment has been used in acute renal graft rejection, Systemic lupus erythematosus, rheumatoid arthritis, corneal graft rejection and optic neuritis. Sasamato and co-workers reported 47 patients of VKH treated with intravenous methylprednisolone and found decreased inflammation and improved visual acuity.[3] Mccluskey *et al* reported use of intravenous methyl prednisolone in scleritis cases. [4] In all above reports, Intravenous methyl prednisolone found to be a potent anti-inflammatory agent. Weiss *et al* reported 20-50% of central visual loss in serpiginous choroiditis patients and recovery of vision following foveal involvement is rare.[5] Bock *et al* also reported irreversible visual loss in serpiginous choroiditis after macular involvement. [6] Therefore, accelerated control of inflammation and prevention of recurrence is the goal of the treatment. We have reported effective role of intravenous methyl prednisolone in treating cases of serpiginous choroiditis with macular involvement. Laatikainen *et al* reported effective use of cytosine arabinoside and azathioprine with reported improvement of visual acuity within one month. [7]A triple agent immunosuppressive regimen using prednisolone, cyclosporine, and azathioprine was reported to result in rapid control of the inflammation but recurrence of disease is also very high. [8]Immunosuppressive agents have potential life threatening complications and require very close follow up. We reported use of IVMP with comparatively safer immunosuppressive (azathioprine) without any serious side effect. It was also very effective in early visual recovery and controlling inflammation. We recommend use of intravenous methyl prednisolone as an initial therapy in serpiginous choroiditis with macular involvement. The result o our study should be interpreted with caution, because it is difficult to reach definitive conclusion in the absence of a control group and long-term follow-up. Although limited in number, previous studies on the natural course of the disease have demonstrated that loss of vision is common due to macular involvement and recurrences. Our treatment regime has favourably altered the course of the disease.

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Source of Support: None Declared
Conflict of Interest: None Declared