· Case report ·

Treatment of macular oedema secondary to idiopathic retinitis, vasculitis, aneurysms, and neuroretinitis with intravitreal triamcinolone

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Abstract

• AIM: To report the treatment of macular oedema secondary to idiopathic retinitis, vasculitis, aneurysms, and neuroretinitis (IRVAN) with intravitreal triamcinolone.

• METHODS: Case report.

• RESULTS: A patient diagnosed with IRVAN with visual loss secondary to macular oedema. The macular oedema and her visual acuity was improved dramatically with the administration of intravitreal triamcinolone.

• CONCLUSION: Previous reports recommend treatment of IRVAN with panretinal photocoagulation, vitrectomy, systemic and periocular steroids. Our case shows that intravitreal triamcinolone appears to be a safe and effective treatment for macular oedema and vasculitis secondary to IRVAN.

• KEYWORDS: IRVAN; intravitreal triamcinolone; optical coherence tomography; macular oedema

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INTRODUCTION

IRVAN is a rare retinal vascular condition diagnosed by the clinical criteria of retinal vasculitis, aneurysms at arterial bifurcations and neuroretinitis[1]. It is usually bilateral, has a female preponderance and can cause visual impairment by macular oedema, progressive retinal ischaemia and its sequelae. Various treatment options for IRVAN have been postulated including panretinal photocoagulation, vitrectomy, systemic and periocular steroids with varying success[2]. We report a case of macular oedema secondary to IRVAN which was treated with intravitreal triamcinolone.

CASE REPORT

A 53 years old female presented to our eye clinic with a three month history of painless, gradual deterioration of her left vision. She had no previous ocular or systemic medical history. On presentation, her visual acuity was 6/6 on the right and 6/36 on the left. Anterior segment examination was unremarkable. Dilated fundoscopy revealed aneurysmal arterial dilatation, retinal vasculitis and multiple exudations at the posterior pole of her left eye. There was minimal vitritis and no evidence of neovascularization in her left eye. No abnormality was seen in her right eye. She was diagnosed with unilateral IRVAN and treated with a short course of systemic steroids. Grid laser was given for her macular oedema (Figure 1, 2). The retinal vasculitis was improved but her macula remained oedematous. A single dose of intravitreal triamcinolone (40g/L) was administered into her left eye. There was a dramatic improvement of macular thickness as shown by optical coherence tomography(OCT) (Figure 3, 4) within a month. There was no recurrence of any vasculitis or macular oedema 18 months post intravitreal steroid administration. Her left visual acuity stabilized at 6/9(Figure 5). Her intraocular pressure was within normal limits.

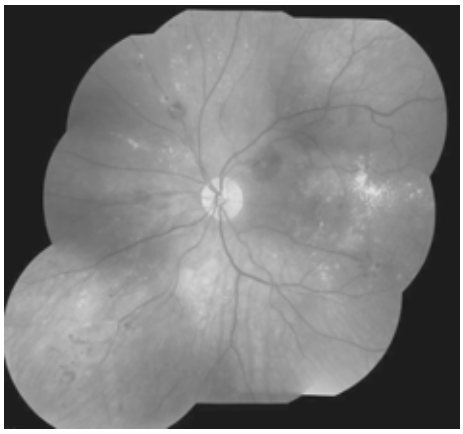

Figure 1 Colour fundus photograph showing left IRVAN.

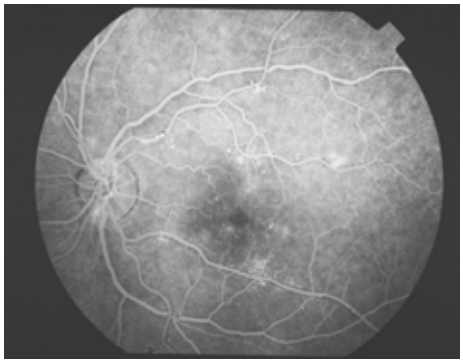

Figure 2 Fluorescein angiogram showing leakage at the posterior pole.

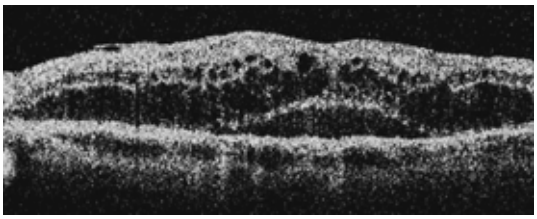

Figure 3 OCT showing macular oedema pre-intravitreal triamcinolone injection.

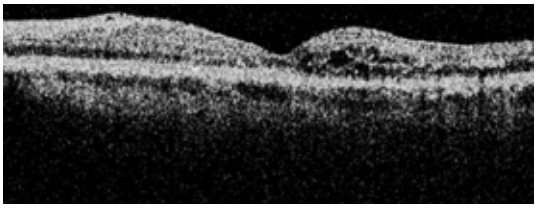

Figure 4 OCT one month after intravitreal triamcinolone.

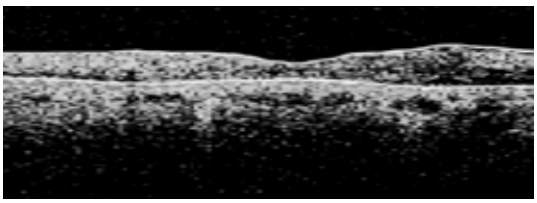

Figure 5 OCT 18 months post intravitreal triamcinolone.

DISCUSSION

The treatment of IRVAN is based on its clinical features. Panretinal photocoagulation or vitrectomy has been advocated for neovascularisation secondary to retinal ischaemia. Steroids have been given systemically or into Sub Tenon's capsule in attempt to reduce the vasculitis and prevent further ischaemic sequelae. Immunosupressive therapy with cyclosporine or methotrexate had been used in a few cases with equivocal success[2].

Intravitreal corticosteroid has been used to treat diabetic maculopathy[3] and macular oedema secondary to retinal venous occlusion[4]. Intravitreal triamcinolone has the effect of reducing the intraocular inflammation, macular oedema and downregulating the angiogenic growth factors[5] within the eye. In this case, intravitreal triamcinolone was effective in reducing macular oedema and the vasculitis secondary to IRVAN. The efficacy of intravitreal triamcinolone in our case suggest that intravitreal corticosteroids may have an effect on the inflammatory cascade of IRVAN and would be a useful adjunct to treatment with laser photocoagulation, vitrectomy or immunosuppressive agents if given in its early stages before any evidence of retinal ischaemia. In the later stages of IRVAN, it is unlikely that the use of intravitreal corticosteroids alone will be sufficient to control the ischaemic sequelae. The inflammatory cascade would have initiated an increase or upregulation of angiogenic growth factors within the eye.

Intravitreal triamcinolone is not without its potential ocular complication and side-effects. The reported side-effects of such injections include persistent floaters, glaucoma, progressive cataract formation, endophthalmitis, transient central retinal artery occlusion, retinal detachment and potential reactivation of cytomegalovirus retinitis[6].

From this case, intravitreal triamcinolone appears to be a safe and effective treatment for macular oedema and vasculitis secondary to IRVAN. Any signs of retinal ischaemia should be treated with panretinal photocoagulation. Early identification and treatment of IRVAN before its progression to neovascularization provides a better prognosis.

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玻璃体内注射曲安奈德治疗继发于 IRVAN 的黄斑水肿

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摘要

目的:报告玻璃体内注射曲安奈德对特发性视网膜炎、血管炎、动脉瘤及视神经视网膜炎(IRVAN)所致的黄斑水肿的治疗效果。

方法:病例报告。

结果:患者诊断为特发性视网膜炎、血管炎、动脉瘤及视神经视网膜炎导致的伴有视力丧失的继发性黄斑水肿。玻璃体内注射曲安奈德后黄斑水肿减轻,视力显著改善。

结论:以前的报告建议采取全视网膜光凝,玻璃体切除术及全身和眼部类固醇治疗。对于继发于 IRVAN 的黄斑水肿和血管炎,玻璃体内注射曲安奈德是一种安全有效的治疗方法。

关键词:IRVAN;玻璃体内注射曲安奈德;光学相干断层扫描;黄斑水肿