ORIGINAL ARTICLE

Efficacy of Intravitreal of Triamcinolone Acetonide injection in patients with refractory Diabetic Macular Edema

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ABSTRACT

Aim: To assess the efficacy of Intravitreal Triamcinolone Acetonide injection in patients with refractory Diabetic Macular Edema.

Methods: This was an interventional prospective hospital based study conducted at Eye unit of BVH Bahawalpur from January 2017 to April 2017.Fifty eyes of fifty patients received Intravitreal Triamcinolone Acetonide injection in a single dose of 4 mg /0.1 ml. Visual Acuity was measured preoperatively and postoperative visits of one week, one month and three months using Snellen's Visual Acuity Chart.

Results: Preoperative, there was 1(2%) eye with VA > 6/18, 28 (56%) with VA 6/24-6/60 and 21 (42%) eyes with VA < 6/60 vision. On third postoperative month follow up , there were 6 (12%) eyes with VA 6/18, 31 (62%) with VA 6/24-6/60 and 13(26%) eyes with VA <6/60 vision. There is statistically significant difference between the preoperative and postoperative Visual Acuity i.e., P=0.05

Conclusion: This study reveals that Intravitreal injection of Triamcinolone Acetonide in a dose of 4 mg/0.1ml considerably improved vision in the patients with diffuse Diabetic Macular Edema refractory to previous Macular Grid photocoagulation at 3 months after injection.

Keywords: Snellen"s visual actuity chart, diabetic macular edema

INTRODUCTION

Blindness is the most common complication of Diabetes Mellitus but it is preventable as well[1]. Proliferate Diabetic Neuropathy and Diabetic Macular Edema are the most common causes of blindness not only in Pakistan but all over the world[2]. Visual impairment in diabetics' patients is usually due to involvement of fovea[3]. Laser photocoagulation reduces the risk of visual loss for all eyes with diabetic macular edema by about 50% as demonstrates by Eaig Treatment Diabetic Retinopathy Study (ETDRS).The use of intraventional Triamcinolone Acetonide as treatment of refractory diabetic macular edema was first proposed in 1999. It was mainly due to effect of alternating the vascular endothelial growth factor (VEGF) mediated retinal epithelial capillary permeability that is presumed to be contributing factor. The purpose of this study to evaluate visual outcome with interventional Triamcinolone Acetonide injection in patients wityh refractory diabetic macular edema.

MATERIAL AND METHODS

This was an interventional prospective hospital based study conducted at Eye unit of BVH Bahawalpur from January 2017 to April 2017.Fifty eyes of fifty patients received Intravitreal Triamcinolone Acetonide injection in a single dose of 4 mg /0.1 ml. Visual Acuity was measured preoperatively and postoperative visits of one week , one month and three months using Snellen's Visual Acuity Chart. Post operative visual examination, IOP S/L examination of anterior segment and detailed fundus examination were proposed in all patients on 1 week, 1 month and 3 months interval.

RESULTS

There were 27 (54%) males and 23 (46%) females with mean age of 53.2 years and standard deviation of 4.76 years. Preoperative, there was 1(2%) eye with VA >6/18, 28 (56%) with VA 6/24-6/60 and 21(42%) eyes with VA < 6/60 vision. On third postoperative month follow up, there were 6(12%) eyes with VA 6/18, 31(62%) with VA 6/24-6/60 and 13 (26%) eyes with VA <6/60 vision. Preoperative IOP was between 10-16mmHg. Mean IOP was 13mmHg with standard deviation of 8.50mmHg. Cataract developed in 2(4%) eyes. One eye developed post operative Endopthalmotitis which was treated successfully. 29(58%) eyes had no post operative complications at al.

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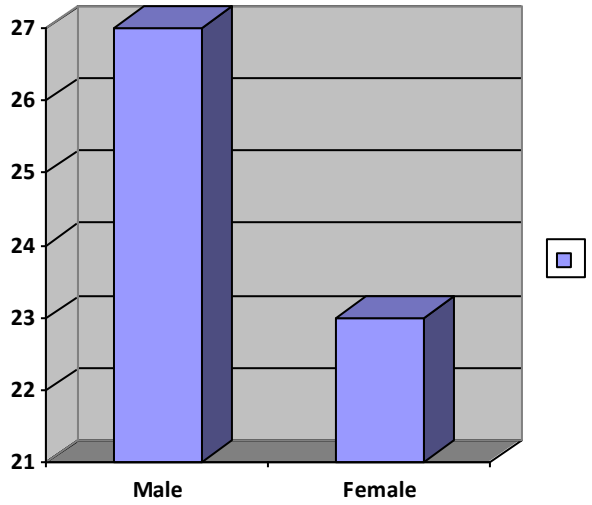

DISCUSSION

Diabetic retinopathy is the leading cause of blindness in patients aged more than 50 years in our country. This was an interventional prospective hospital based study. Fifty eyes of fifty patients received Intravitreal Triamcinolone Acetonide injection in a single dose of 4mg/0.1ml. Visual Acuity was measured preoperatively and postoperative visits of one week , one month and three months using Snellen's Visual Acuity Chart . Intravitreal Triamcinolone Acetonide injection has increasing been used in previous study as treatment fir intraocular preoperative edematous and non vascular disease[7-11].

Complications	**n**
Secondary Glaucoma	18 (36%)
Catract	2 (4%)
Endopthalmitis	1 (1%)

This study supported that that the use of Intravitreal Triamcinolone Acetonide injection improved Visual acuity in patients with refractory diabetic macular edema.

Male	Female
27 (54%)	23 (41%)

The main side effects of Intravitreal Triamcinolone Acetonide injection observed was an increase of IOP. Eighteen (36%) eyes developed maximum of IPOP measured more than 21mmHg. Secondary glaucoma was usually treated by tropical beta blockers and carbonic inhibitors anti glaucoma medications.

CONCLUSION

Macular edema in diabetic patients is a major factor of visual impairment. This study reveals that Intravitreal injection of Triamcinolone Acetonide in a dose of 4 mg/0.1ml considerably improved vision in the patients with diffuse Diabetic Macular Edema refractory to previous Macular Grid photocoagulation at 3 months after injection

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