Sriwijaya Journal of Ophthalmology(SJO)

http://sriwijayaopthalmology.com

Vol 1 Issue 1 2018

Effect Anti VEGF Intravitreal to Central Retinal Vein Occlusion

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Abstract

Introduction. The cause of blood vessels abnormalities in the retina in addition to diabetes is obstruction in the veins. In general, retinal vein blockages are distinguished in two types i.e. blockage of retinal veins (BRVO) and obstruction of the central vein of the retina (CRVO). Reported a case of a central retinal vein occlusion with intravitreal anti-injection treatment of a VEGF Bevacizumab.

Case presentation. A man, Mr. T, aged 52 years, with an address outside the city, the work of the foreman, came to RSMH's eye on October 2014. Anamnesis the main complaint of the right eye eyesight was suddenly dark since, one day before. One day before go to hospital, the sufferer complained about the right eye suddenly until it felt dark. He also complain often headaches without nausea and vomiting since before his right eye vision becomes blurred. Intravitreal anti-VEGF injection in these patients is planned to be re-done 4-6 weeks after the first injection if there has been no improvement in his vision. Evaluation of the effectiveness of intravitreal Bevacizumab anti-VEGF therapy through sharp improvement of vision, clinical features and anatomical improvement.

Conclusion. A case of central retinal vein occlusion was reported in a 52-year-old male. After anamnesis, ophthalmologic examination and investigations, a diagnosis of CRVO is managed by intravitreal Anti VEGF injection.

Keywords: central retinal vein, occlusion, case report.

Introduction

The cause of blood vessels abnormalities in the retina in addition to diabetes is obstruction in the veins. In general, retinal vein blockages are distinguished in two types i.e. blockage of retinal veins (BRVO) and obstruction of the central vein of the retina (CRVO).[1] Retinal vein blockages are a clinical state of vision threatening, and generally occur in old age.[2] The prevalence of the Central Retina vein in Australia ranges from 0.7% at the age of 49-60 years to 4.6% at the age of more than 80 years.[3]

The incidence of obstruction in the retinal veins varies between 2 and 8 per 1000 persons.[4] CRVO is not influenced by race but more often occurs in males than females.[1,2] Central Retinal Vein Occlusion (CRVO) is an acute blockage of the central retina vein that causes abnormalities in the retina, characterized by sudden declining vision.[1.3] CRVO is divided into 2 types namely: non-ischemic CRVO and ischemic CRVO, which is more dangerous ischemic type that can threaten eyesight. Both types are distinguished based on clinical symptoms and supporting examinations, which include the sharpness of the vision, the relative absence of the pupil's afferent defect, the extent of bleeding on the retina, and the results adapted to the auxiliary examination.[1-3]

Clinical symptoms are usually found to be a sharp decrease in the central or peripheral vision, which may deteriorate until only the perception of light. There is no pain and usually about one eye. Sharp central vision disturbed when bleeding about the macular area.[2.3]

Diagnosis is enforced based on clinical representation, findings on its poster segment examination and results gained on supporting examinations. Management of the CRVO is a complex and generally aimed at improving perfusion, overcoming underlying etiology and preventing further complications.[3.4]

Reported a case of a central retinal vein occlusion with intravitreal anti-injection treatment of a VEGF Bevacizumab.

Case Report

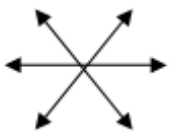
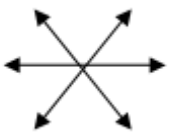
A man, Mr. T, aged 52 years, with an address outside the city, the work of the foreman, came to RSMH's eye on October 2014. Anamnesis the main complaint of the right eye eyesight was suddenly dark since, one day ago

The history of the disease from one day before the hospital, the sufferer complained about the right eye suddenly until it felt dark. Sufferers also complain often headaches without nausea and vomiting since before his right eye vision becomes blurred. The history as seen flashes of light are denied. Visions like closed curtains are denied. Red eyes denied. Seeing objects or objects become not intact or the dark parts of the view are denied. Patients then have medication to the clinic in the company and referred to the RSMH. The sufferer also has a smoky blurred vision since the last 5 years.

History of the disease, hypertension (+) since 5 years ago, history of hyperlipidemia since, 2 years ago, the history of diabetes was denied, the history of smoking since 10 years ago, the history of trauma denied.

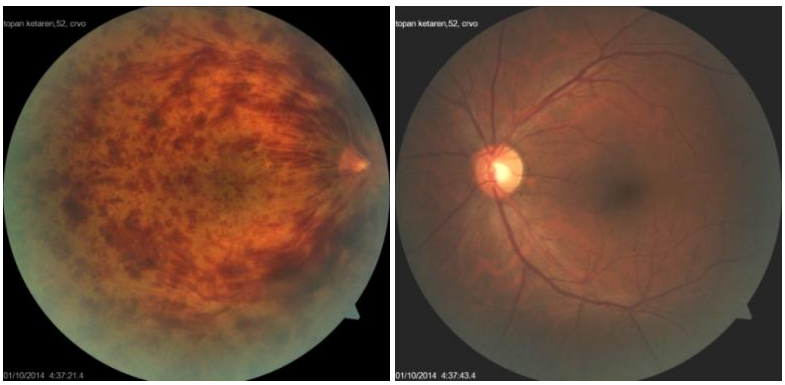
Physical examination of generalist status general conditions: Good, Consciousness: Compos mentis, blood pressure: 160/90 mmHg, pulse: 82 x/minutes, Respiratory: 20 x/minutes, temperature: 36.5^{o}C, BMI: 22.4 kg/m^{2}.

Ophthalmology Status Table

	OD	OS
Vision	1/60	6/9 ph 6/7,5
Intra ocular pressure	18,5 mmHg	18,5 mmHg
Eyeball position	Ortoforia	
Eyeball movement		
Palpebra	Quite	Quite
Conjunctiva	Quite	Quite
Cornea	Clear	Clear
Front eye chamber	Medium	Medium
Sliced	Good Image	Good Image
Pupil	Round, central, RC (+), Ø 3 mm, RAPD (-)	Round, central, RC (+), Ø 3 mm, RAPD (-)
Lens	Murky, nuclei gr I	Murky, nuclei gr I

Posterior Segment	RFOD (+)	RFOS (+)
Papil	Round, firm boundary, red color, c / d 0.3, a / v 1: 3, peripapillary bleeding (+)	Round, firm boundary, red color, c / d 0.3 a / v 2: 3
Macula	RF (+), edema ↓ (+)	RF (+)
Retina	Sclerotic (+), Venous dilation (+), Bleeding in 4 quadrants (+), dot (+), blot (+), flame shape (+)	Good blood vessel contour

Fundus photo retinal drawing



Laboratory results table

Examination	Result	Reference	Unit
Hematologist			
Hemoglobin (HGB)	14,5	14-16	g/dl
Erythrocytes (RBC)	4.29	4.0-5.0	$10^6/mm^3$
Leukocytes (WBC)	6.8	5-10	$10^3/mm^3$
Hematocrit	40	37-43	Vol%
Platelets (PLT)	395	200-500	10^3/ul
LED	30	< 38	mm/hours
Blooding time	3	1-3	Minutes
Freeing time	9	9-15	Minutes
Glucose in the time	88		mg/dl
Calculate Type			
B/E/Nb/Ns/L/M	0/6/1/59/26/8		%
Clinical Chemistry			
Total Cholesterol	**300**	< 200	mg/dl
HDL Cholesterol	**75**	> 65	mg/dl

LDL Cholesterol	**180**	< 130	mg/dl
Triglycerides	**200**	< 150	mg/dl
Ureum	17	15 - 39	mg/dl
Creatinine	0.7	0.6 - 1.0	mg/dl
Cero-Immunology			
CRP	Negative	Negative	

Diagnosis of CRVO OD + macular edema OD + O I grade nuclear cataracts, stage II hypertension, hyperlipidemia. Implementation of informed consent, Hospital / Inpatient admission, Pro Injection of VEGF OD with local anesthesia, Antioxidant 2 x 1 tablet, Pro PDL counselor. Prognosis of Quo ad vitam: Bonam, Quo ad functionam: Dubia ad bonam, Quo ad sanationam: Dubia ad bonam.

Discussion

From anamnesis, the patient is a middle-aged male, 52 years old where the disease is 90% more common at age > 50 years, comes with complaints that his right eye vision suddenly blurred since, one day ago until it feels dark without being accompanied by pain. Red eyes do not exist, vision as if there is no curtain. History like seeing flashes of light is also denied. Patients also complain of frequent headaches without nausea and vomiting since before his right eye vision becomes blurred. Patients deny if they see an object or the object's they see becomes incomplete or there is a dark part of their sight. The clinical picture of the patient resembles the clinical appearance of retinal vein occlusion, with a sudden decrease in vision, is unilateral, painless and no red eyes.

In old age, with a history of hypertension, hyperlipidemia and smoking, the retinal arteriolar is narrower. This is because at an older age, the walls of the arteries will experience thickening due to a buildup of collagen in the muscle layer, so that the blood vessels become narrower and stiffer. The research also showed a close relationship between increased blood pressure and narrowing of the retinal arterioles, where the higher the blood pressure, the narrower the retinal arterioles.

The Examination of ophthalmologic status of the right eye showed that the posterior segment had abnormalities in the form of peripapillary bleeding with a / v 1: 3, decreased macular reflexes, edema, and retinal blood vessel contour that was dilated with dot bleeding, blot and flame shape in the corresponding 4 quadrants with CRVO.

At the follow-up when the control patient found complaints had begun to decrease, there was progress in his vision to 6/60 pH (-). On OCT examination this patient found hypo-reflexity in the retina, depression fovea, lesions hyper-reflexity nodular and *nerve fiber layer* elongation, obtained an impression of macular edema OD.

Intravitreal anti-VEGF injection in these patients is planned to be re-done 4-6 weeks after the first injection if there has been no improvement in his vision.

Evaluation of the effectiveness of intravitreal Bevacizumab anti-VEGF therapy through sharp improvement of vision, clinical features and anatomical improvement (examination with FFA and OCT). Ideally in patients with CRVO we do FFA and OCT examinations before being given therapy so that we can assess retinal tissue perfusion and extent of damage to the retina, anatomy and functional retina before therapy and after therapy to find out improvement in retinal tissue both anatomically and functionally.

Patients also have a cataract diagnosis based on history, age over 40 years, sufferers complain of blurred vision and smoky eyes since a few years ago. No history of DM and steroid use was found, no history of trauma or previous cataract surgery. At the final examination obtained 6/60 pH (-) right eye vision and 6/9 pH 6 / 7.5 left eye vision, turbid ODS lens, nucleic with ST (+), so that the diagnosis of ODS immature nucleus senile cataract was established.

Cataract is a condition where there is turbidity of the fibers or lens material, due to abnormal metabolism of the lens which can arise at various ages. The cause of this lens opacification can be primary, secondary to surgical procedures or complications of other diseases

The prognosis in this patient is quo ad vitam bonam because it is not life-threatening, while the quo ad function is dubia ad bonam because this case is a non-ischemic type, besides managing the CRVO, it also treats the underlying risk factors.

Deficiencies in this case report, FFA examination is not carried out to determine the location of ischemic, establish diagnosis, determine the severity of tissue damage in the retina, determine therapy, evaluate therapy as a follow-up and also detect macular involvement in the form of macular edema and ischemia.

Conclusion

A case of central retinal vein occlusion was reported in a 52-year-old male. After anamnesis, ophthalmologic examination and investigations, a diagnosis of CRVO is managed by intravitreal Anti VEGF injection.

In this patient, there was a clinical improvement after receiving the therapy where complaints had diminished and there were no further complications

The diagnosis is based on history, clinical examination, ophthalmological status and investigations. Management in CRVO patients generally aims to improve retinal tissue perfusion and prevent further complications.

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