CASE REPORT

A RARE CASE OF CENTRAL RETINAL VEIN OCCLUSION WITH CILIORETINAL ARTERY OBSTRUCTION IN A YOUNG FEMALE-A CASE REPORT

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INTRODUCTION:

- The association of cilioretinal artery occlusion with central retinal vein occlusion is very rare and not commonly seen in elderly. The so far reported cases are commonly seen in males.
- The pathogenesis of this condition has not yet been established.
- A cilioretinal artery exists in about 30% of individuals. It is a vessel that perfuses the retina and is derived directly from the posterior ciliary circulation rather than from the central retinal artery.

CASE REPORT:

- A 22 year old female with no systemic illness presented with sudden painless diminution of vision in the right eye for 1 day.
- LE enucleated for Retinoblastoma 10 yrs back.
- O/E RE-AS Normal, pupil was RRR
- Vision 6/36 with no PH improvement

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Fundus examination

- Hyperemic disc edema
- Dilated & tortuous veins over the disc
- Multiple peripapillary superficial hemorrhages
- Background-white opaque retinal edema

Investigations

- Hb%-11g%
 - TC-6000cells/cu.mm
 - ESR Normal
 - ANA test was negative
 - Bl. Urea-20mg/dl
 - Sr. Creatinine-0.6mg/dl
 - Chest X ray was normal
 - Cardiac evaluation was normal
 - Lipid profile-WNL
 - Serum Homocysteine levels- 125 Micro moles (normal 5- 15 Micro moles)
- FFA FINDINGS showing delayed AV transit time, peripapillaryhypofluorescence, macular area hypofluorescence

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- Diagnosed as
- ✓ RE-CENTRAL RETINAL VEIN OCCLUSION WITH CILIORETINAL ARTERY OBSTRUCTION ,
CAUSE- HYPERHOMOCYSTEINEMIA
- Treatment given
- ✓ Tab. HOMOCYST OD(choline bitartarate, folic acid, methylcobalamin, Vit B6)
- ✓ Vision improved to **6/6** after 10 days
- ✓ Patient was discharged with continuation of treatment with Tab. Homocyst OD.

DISCUSSION: Ophthalmoscopically, a cilioretinal artery obstruction appears as an area of superficial retinal whitening along the course of the vessel.

- The following clinical variants have been described .

1) Isolated cilioretinal artery obstruction

2) Cilioretinal artery obstruction associated with central retinal artery obstruction

3) Cilioretinal artery obstruction associated with anterior ischemic optic neuropathy.

- Cilioretinal artery obstruction along with central retinal vein obstruction makes up just greater than 40 % of cases of cilioretinal artery obstruction and it is common in males!!!!!!!
- The patho-mechanisms of Cilioretinal artery obstruction(CLRAO) combined with CRVO are not well established.
- Two hypotheses have been proposed:
- (1) CLRAO occurs secondary to the raised capillary pressure caused by CRVO
- (2) A primary reduction in perfusion pressure of the cilioretinal and retinal arteries , leads to decreased retinal circulation and subsequent venous stasis and thrombosis . Systemic blood pressure decrease and inflammatory or atherosclerotic retinal arterial disease have been suggested as possible causes of reduced arterial perfusion pressure.

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In addition, swelling of the optic disc may compromise the cross sectional area of the cilioretinal artery and lead to reduced flow.

- CRVO with cilioretinal artery obstruction because of hyperhomocysteinemia is very rare and the cause of obstruction of the vessels because of homocystiene levels is attributed to

- Its endothelial damage

- Increased endothelial tissue factor expression,

- Activation of coagulation cascade,

- Increased platelet adhesiveness and

- Conversion of low-density lipoprotein cholesterol into smaller forms.

CONCLUSION & SUMMARY:

- CRVO with Cilioretinal artery obstruction is by far very rare condition and is seen in males. With contrast to this, we are reporting a case of female patient.
- So far in the literature the causes of CRVO with cilioretinal artery obstruction was found to be hormone replacement therapy, pulmonary arterial hypertension etc...
- Hyperhomocysteinemia found to cause more of arterial obstructions like CRAO, BRAO and venous obstructions are less common.
- So probably this is the first case report of CRVO with cilioretinal artery obstruction caused by hyperhomocysteinemia!!!!!!

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