A RARE CASE OF CENTRAL RETINAL VEIN OCCLUSION WITH
CILIORETINAL ARTERY OBSTRUCTION IN A YOUNG FEMALE-A CASE
REPORT
K. Satish, D.N. Prakash, Kumar S, Mohan Setlur, Jafar Sadik.

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
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, peripapillary hypofluorescence, macular area hypofluorescence
Diagnosed as
✓ RE-CENTRAL RETINAL VEIN OCCLUSION WITH CILIORETINAL ARTERY OBSTRUCTION ,
 CAUSE- HYPERHOMOCYSTEINEMIA

Treatment given
✓ Tab. HOMOCYST OD(choline bitartrate, 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) Cilioretal 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.
CASE REPORT

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!!!!!!

REFERENCES: