Volume : 4 | Issue : 9 | Sept 2015 • ISSN No 2277 - 8179

Research Paper

Medical Science

KEYWORDS :

0ccular Manifestations of Preclampsia

Dr Rajani Parikh	Asso Prof, Government Medical College, Bhavnagar
Dr G K Kadikar	Asso Prof, Government Medical College, Bhavnagar
Dr A V Gokhle	Prof & Head Government Medical College, Bhavnagar

ABSTRACT

The incidence of PIH in otherwise healthy women is approximately 5% and is more common in primigravidas. Some of these patients present with symptoms related to opthalmic system like blurring or loss of vision. These symptoms are generally associaated with imminent eclampsia and poor feotal outcome. This should be kept in mind whenever an antenatal patient complains of occular symptoms. The causes and management of these problems are variable. An insight into these pathologies will help us to attain a better feto- maternal outcome.

Introduction:

Pre eclampsia Eclampsia is condition commonly encountered in obstetrics. Some of these patients present with symptom of blurring of vision or blindness. The causes of these symptoms vary widely and so does the management. We present here four cases of loss of vision associated with Pre eclampsia and Eclampsia with each one being a result of different pathology. We present these cases to show the effect of preclampsia on the occular system.

Case 1:

A primigravida with 8 months pregnancy was referred for convulsion and IUFD with bilateral loss of vision post convulsions. There was history of loss of vision in left eye since 3 months. Patient had consulted an ophthalmologist and MRI Brain at that time was suggestive of left optic nerve atrophy. Patient had not taken antenatal visit with any gynaecologist at that time. There was no improvement in vision in left eye. On admission she was conscious and well oriented, temperature was normal. Pulse was 96/ min, BP was 160/ 120mmHg with no pallor, icterus or oedema. Uterus was 24-26 weeks, relaxed and FHS were absent. Cervix was 2finger loose, early effaced, membrane was present. Urine albumin was ++. Injection magnesium sulfate and capsule Nifidepine was started. LFT was slightly raised: S. Alk PO4 164IU/L (42-98 IU/L), S.GOT 88U/L(Upto 31 U/L), SGPT 48U/L(upto 34U/L).All other investigations were within normal limit. So labour was induced. Opthalmic examination showed no perception of light in both eyes. Fundus examination showed secondary optic nerve atrophy with arterial attenuation , silver wire apperarance. After 5 hours pt. delivered male still born of 1.1 kg. MRI a present showed bilateral **optic nerve atrophy** with prominent perineural sheath, Ischemic small vessel disease over frontal and parietal region and restricted diffusion over bilateral occipital region s/o ischemia/infarct. MRI venography showed non visualisation of anterior portion of superior saggital sinus, left transverse sinus, both sigmoid sinus and proximal portion of right transverse sinus with possibility of **sinus thrombosis**. So Injection mannitol, Tab aspirin and tab atorvastatin was started.

On 6th post partum day, vision in right eye was 6/24 and in left eye hand movement and perception of light present. On 9th post partum day vision in Right eye was 6/6 and in left Counting finger at 1 feet present. At 1month post partum vision was 6/6 in both the eyes.

Case 2:

A 23 years old Muslim female patient was seen with post partum Eclampsia. She was Primi Para and had undergone LSCS for Ante partum Eclampsia at private hospital. In the immediate postpartum period, she had convulsions for which full dose of Magnesium sulphate was given, but she did not improve and had repeated convulsions. On admission, the patient was very drowsy - though arousable to repeated verbal commands, Glasglow coma scale was 10/15. Patient's temperature was normal, pulse was 130/min, BP was 160/100mm Hg, Urine albumin was +++ and Bilateral plantars were ++.The patient was started on Injection Phenytoin in a loading dose followed by 100mg 8 hrly and Nifidepine 10mg qds. Her convulsions stopped with this treatment. On the 2nd day, patient was drowsy. On the 3rd day morning, she was conscious, and complaining of loss of vision. She was not able to count fingers t 1 feet. Fundus examination was normal with no signs of papilloedema. Pupils were reacting to light with visual acuity was 4/60

CT scan and MRI was suggestive of **Posterior reverse encephalopathy syndrome(PRES)**. In view of PRES, patient was managed conservatively with oral Nifedipine and Injection Phenytoin with closed monitoring. Patient's vision improved t 6/6 and level of consciousness, BP and vitals improved gradually by 10th day post partum. She was advised to continue Tab Phenytoin up to 6 weeks.

Case 3:

A primigravida patient with fullterm pregnancy with 6 days overdue was referred as a case of imminent Eclampsia with complaints of loss of vision since morning. On admission patients pulse was 96/min, BP was 150/90. Per Abdomen uterus was full term, cephalic , FHS were regular, relaxed. Per vaginal examination showed cervix was 1 finger, early efffaced. Urine albumin was +2. USG showed severe oligoamnios with AFI 2.1. All investigations were sent which were normal. On opthalmic examination bilateral pupils were reacting to light with acuity >2/60. and Fundus was NAD. LSCS was done under epidural anaesthesia in veiw of severe oligoamnios with imminent Eclampsia. Post operatively BP was controlled with labetolol and Nifidepine. Prophylactically Inj. Magsulf was given for 24 hours postpartum. MR Venography showed **partial occlusion of left sigmoid and transverse sinus, left IJV occlusion and hemetoma involving left pasterior parietal region.** Tab Epsolin 100mg Bd was started and antithrombotics were starte from 7th post operative day.

On 3rd postpartum day vision was 4/60 right eye and 2/60 in left eye which returned to normal by 15th day postpartum.

Case 4:

Pt was seen in medicine ward on 12th day postpartum in c/o preterm home delivery with complaints of sudden loss of vision since 3 days. Pt had associated complaints of vomiting and

headache since 1 day. On admission her temperature was normal, pulse 80/min and BP was 160/100 mm Hg. Urine Albumin was ++. Her CBC, RBS, RFT and LFT were WNL. Her vision in Left Eye was 6/36 and in right eye finger counting at 1 feet with perception of light present in all 4 quadrants. Her fundus examination showed **bilateral papilloedema**. MRI showed multiple deep white matter foci of T2/Flair hyperintensities suggesting **white matter is chaemic changes/ demyelinaton.** She was started with cap.nefidipine 10 mg tds and injection mannitol 100 mg IV followed by syrup glycerol 2 tsp tds. Her vision improved slowly over 7 days.

Discussiion:

The incidence of PIH in otherwise healthy women is approximately 5% and is more common in primigravida. PIH has various maternal and fetal consequences, including ocular sequelae in up to one third of cases.

Normally due to pregnancy the normal intra-ocular pressure (the fluid pressure within the eye) may decrease slightly due to certain hormonal and circulatory change .[1] Fluid retention may lead to change in refractive power. It is usually a temporary change and resolves after 6 wks postpartum.

The most common ocular complaint is visual blurring; however other symptoms have been reported, including photopsias, scotomas, and diplopia. The protean ocular manifestations include retinopathy, optic neuropathy, serous retinal detachment and occipital cortical changes[1].

The changes that occur in PIH induced retinopathy are similar to changes from hypertensive retinopathy. The most common finding is focal arteriole narrowing, which also may be diffuse. Other changes may include retinal hemorrhages, retinal edema, cotton wool spots, nerve fiber layer infarcts and vitreous hemorrhage and papilledema. A positive correlation exists between the severity of PIH and degree of retinopathy, however most changes are reversible once PIH resolves. **Cortical blindness** has also been seen in association with severe pre eclampsia/ eclampsia around the time of delivery.

Studies of patients with pre-eclampsia and eclampsia, found that those patients with retinal hemorrhages and cotton wool spots had a higher rate of fetal mortality. Jagdish Bhatia et al *.Pak J Ophthalmol 2007)*[1] as was seen in case 1.

So once visual disturbances develop, termination of pregnancy must be considered. Further continuation of pregnancy may lead to complications.

Visual loss following eclampsia is usually reported to be a result of retinopathy, exudative retinal detachment or cortical blindness[2].**Omoti AE et al.** ***Afr J Reprod Health.*** **2008; 12(3):185-196.**

For cerebral venous sinus thrombosis , Clinical practice guidelines now recommend heparin or low molecular weight heparin as the initial treatment , followed by war farin, provided there are no other bleeding risks that would make these treatments unsuitable.[3,4,5] The duration of war farin treatment depends on the circumstances and underlying causes of the condition. If the thrombosis developed under temporary circumstances (e.g. pregnancy), three months are regarded as sufficient. Thrombolys is (removal of the blood clot with "clot buster" medication) has been described, either systemically by injection into a vein or directly into the clot during angiography. The 2006 European Federation of Neurological Societies guideline recommends that thrombolysis is only used in patients who deteriorate despite adequate treatment, and other causes of deterioration have been eliminated.[3] American guidelines make no recommendation with regards to thrombolys is, stating that more research is needed.[5]

The treatment of PRES depends on the underlying cause. For instance, if the main problem is high blood pressure, blood pressure control will accelerate the resolution of the abnormalities. [6]

Conclusion

Preeclampsia is one of the leading causes of maternal and fetal morbidity and mortality worldwide. Visual disturbances in (pre) eclampsia seem to be frequent phenomena. Therefore, the obstetrician/gynecologist may encounter women with serious, and sometimes debilitating, pathology of the visual pathways. Lowering the blood pressure and termination of pregnancy is indicated for women who experience visual changes. Although in most cases visual acuity returns to normal within weeks to months after the onset of symptoms, rarely permanent visual impairment can occur. [7]

Health care providers should be aware that acute onset of visual symptoms in pregnant women can be the first sign of (pre)eclampsia. Also in all patients with (pre) eclampsia , ophthalmic examination and its follow up in pregnancy and postpartum is a must. This will help to know the severity of the condition, and those with ocular manifestations should be reassured that these changes are transient.

REFERENCE

1. Jagdish Bhatia, Mohammad Naqaish Sadiq, Taqdees Anwar Chaudhary, Agdish Bhatia Pak J Ophthalmol 2007 | | 2. Omoti AE et al. Afr J Reprod Health. 2008; 12(3):185-196. | | 3. Einhäupl K, Bousser MG, de Bruijn SF, et al. (2006). "EFNS guideline on the treatment of cerebral venous and sinus thrombosis". Eur. J. Neurol. 13 (6): 553–9. | 4. National Institute for Health and Clinical Excellence. Clinical guideline 68: Stroke. London, 2008. | 5. Sacco RL, Adams R, Albers G, et al.. "Guidelines for prevention of stroke in patients with ischemic stroke or transient ischemic attack: American Heart Association/American Stroke Association Council on Stroke: March 2006, Circulation 113 (10): PMID 16534023. | | 6. Pedraza, R; Marik PE; Varon J. "Posterior Reversible Encephalopathy Syndrome: A Review". November 2009. Critical Care and Shock 12: 135–143 | 7. Roos NM1, Wiegman MJ, Jansonius NM, Zeeman GG.). Visual disturbances in (pre)eclampsia. Obstet Gynecol Surv. 2012 Apr;67(4):242-50. |