Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery

**Corresponding Author:**
Dr. Karandeep Rishi,
Consultant, Ophthalmology, Sai Ram Charitable Eye Hospital, Kurukshetra, 136118 - India

**Submitting Author:**
Dr. Karandeep Rishi,
Consultant, Ophthalmology Sai Ram Charitable Eye Institute, Kurukshetra, 136118 - India

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nil

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nil
Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery

Author(s): Rishi K, Puri M

Abstract

Sudden hypotension complicated with anaemia can lead to acute bilateral simultaneous posterior ischaemic optic neuropathy (PION). Such cases have been described in the perioperative period; however PION developing after normal vaginal delivery is a very rare occurrence. We report a case of 32 years old para 3 who presented to us on the second post-partum day after a normal vaginal delivery with bilateral vision loss and had no visual recovery even 8 weeks post-partum.

Introduction

Ischemic optic neuropathy is a rare complication of massive haemorrhage. Of the reported cases of post haemorrhagic amaurosis, approximately 30% are the result of uterine haemorrhage. The pathogenesis of ischemic optic neuropathy is unclear. Severe anaemia, with or without arterial hypotension that may result in optic nerve hypoxia or ischemia is the proposed mechanism (1) We report a rare case of posterior ischaemic optic neuropathy that occurred on the second post-partum day. She had residual visual loss even after 8 weeks post-partum.

Case Report(s)

A 32 years old para 3 presented to our emergency department with history of sudden, painless loss of vision since 2 days. She had a full term vaginal delivery at a peripheral hospital 4 days back complicated with atonic post-partum haemorrhage managed with uterotonics and 3 blood transfusions. At the time of presentation vision was perception of light in both eyes with inaccurate projection of rays. Her BP was 116/68 mm of Hg and pulse was 90/min. Anterior segment examination was normal. Both pupil were mid-dilated with sluggish reaction to light. Fundus examination revealed no abnormal findings. There was no focal neurological deficit and her higher mental functions were normal. MRI brain and orbit did not reveal any abnormality. Visual evoked potential were carried out in both the eyes which revealed bilateral increased latency. Fundus fluorescence angiography was within normal limits and did not show any area of non-perfusion in the retina. OCT was within normal limits bilaterally. Haemoglobin was 8gm%.

A provisional diagnosis of Posterior ischemic optic neuropathy was made. Patient was given 3 day course of pulse methylprednisolone 1g/day to reverse any neurological injury. On day seven vision improved to 5/200 snellen visual acuity in both eyes and remained the same at 4 week follow up. Fundus examination at 4 week revealed mild disc pallor which increased at 8 week follow up.

Discussion

The proposed pathogenesis of PION is sudden hypotension leading to ischaemic hypoxia to the posterior optic nerve. Other possible mechanisms include release of circulating vasoconstrictors (i.e., angiotensin, epinephrine, and vasopressin) as a result of activation of the sympathetic nervous system, resulting in vasoconstriction and optic nerve ischemia. Buono et al (2) described the diagnostic criteria for PION which includes (1) an acute decrease in visual acuity, visual field, or both; (2) an ipsilateral relative afferent pupillary defect, unless there is bilateral symmetrical involvement or a pre-existing contralateral optic neuropathy when the pupils are sluggish or nonreactive to light (3) documentation of a normal optic disc at the onset of visual deficit; (4) exclusion of other identifiable causes of visual deficit, including retinal and glaucomatous problems, and other causes of optic neuropathy, such as compression, demyelination, or inflammation with neuroimaging; (5) an abnormal VEP; (6) a normal ERG. (7) development of optic disc pallor within 4 – 8 weeks of onset of visual loss.

Chun and Levin (3) described a similar case of PION that occurred after massive haemorrhage of ruptured ectopic gestation and left the patient with permanent vision loss.

We thus describe an unusual case of PION that occurred after post-partum haemorrhage and led to permanent visual impairment.
Bibliography

Reviews

Review 1

Review Title: Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery

Posted by Dr. Aman Shah Abdul Majid on 22 Jun 2012 03:11:49 PM GMT

What are the main claims of the paper and how important are they?:
Sudden hypotension complicated with anaemia can lead to acute bilateral simultaneous posterior ischaemic optic neuropathy (PION) post partum vaginal delivery.

Yes

Yes

Yes

If a protocol is provided, for example for a randomized controlled trial, are there any important deviations from it? If so, have the authors explained adequately why the deviations occurred?
Not Applicable

Not Applicable

Please Include IOP Values

Please Include IOP Values

Rating: 5

Comment:
No

Competing interests: No

Invited by the author to make a review on this article? : No

Have you previously published on this or a similar topic?: Yes

References:

How to cite: Abdul Majid A,Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery [Review of the article 'Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery ' by ].WebmedCentral 1970;3(6):WMCRW001961
Review 2

Review Title: Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery

Posted by Lead Faculty Dr. Tan Aik Kah on 22 Jun 2012 03:34:00 AM GMT

What are the main claims of the paper and how important are they?:
Acute bilateral simultaneous posterior ischaemic optic neuropathy (PION) developed after. Such cases have r normal vaginal delivery is a very rare occurrence.

No because there was post partum hemorrhage.

Yes

Fundus photograph, fundus angiography, MRI of the orbit and brain should be provided for readers to judge that all investigations were indeed normal.

If a protocol is provided, for example for a randomized controlled trial, are there any important deviations from it? If so, have the authors explained adequately why the deviations occurred?
Not applicable

Not applicable

Not applicable

Not applicable

Rating: 3

Comment:
The authors should discuss the role of iv methylprednisolone in the treatment of PION

Competing interests: Nil

Invited by the author to make a review on this article? : No

Have you previously published on this or a similar topic?: No

Experience and credentials in the specific area of science:
Clinical experience

How to cite: Anonymous. Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery [Review of the article 'Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery ' by ]. WebmedCentral 1970;3(6):WMCRW001957
Review 3

Review Title: PION Following Vaginal Delivery

Posted by Lead Faculty Dr. Theodore Leng on 28 Apr 2012 03:59:32 AM GMT

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<td>Is the subject of the article within the scope of the subject category?</td>
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<td>2</td>
<td>Are the interpretations / conclusions sound and justified by the data?</td>
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<td>3</td>
<td>Is this a new and original contribution?</td>
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<td>Can you suggest brief additions or amendments or an introductory statement that will increase the value of this paper for an international audience?</td>
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<td>Are the keywords and abstract or summary informative?</td>
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Rating: 4

Comment:
Suggest adding some more references in the introduction section. Especially where you cite that 30% of post haemorrhagic amaurosis is the result of uterine haemorrhage.

Was IV contrast given for the MRI?

Was a HVF or GVF performed? Was there a VF defect?

Was color vision testing performed?

Competing interests: No

Invited by the author to make a review on this article? : No

Have you previously published on this or a similar topic?: No

Experience and credentials in the specific area of science:
I'm a practicing ophthalmologist.

How to cite: Leng T. PION Following Vaginal Delivery [Review of the article 'Posterior Ischaemic Optic Neuropathy Following Vaginal Delivery ' by ].WebmedCentral 1970;3(4):WMCRW001741
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