

Abducens Nerve Palsy in Pregnancy: A Case Report

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ABSTRACT

Headache, blurring of vision and confusion are neurologic symptoms of preeclampsia. Whereas abducens nerve palsy during pregnancy is an extremely rare condition, we report here a 40-year-old patient with diplopia, blurring of vision and abducens nerve palsy in the 39th week of pregnancy with history of hypertension (HTN). No specific pathology was found. Symptoms of abducens nerve palsy were resolved spontaneously by controlling blood pressure after delivery.

Keywords: Hypertension, Preeclampsia, Sixth nerve palsy

CASE REPORT

A 40-year-old woman at 39 weeks of gestation gravida 3, para 2 complaining blurring of vision and diplopia was referred to our medical center. The patient was alert and verbal communication was normal. She had hypertension with blood pressure 160/110 mm Hg. On physical examination, except deviation of the left eye and the inability to move the eye outward, no other neurological signs were observed.

Fundoscopy examination was normal. She had cesarean section for previous two pregnancies with diagnosis of preeclampsia. She had been monitored for high blood pressure and treated with methyl dopa in recent pregnancy. Lab tests showed the following; Hb: 13.6 g/dl, Plt: 96000, Proteinuria: 1+, Cr: 0.7, AST: 34 lu/l, ALT: 26 lu/l, LDH: 403 lu/l, INR: 1.1, PT: 12, PTT: 38. Chest X-Ray and ECG were normal.

To prevent eclampsia and seizure 4 grams magnesium sulfate was started on admission then 2 grams per hour to 24 hours after delivery. When the blood pressure exceeded 140/100 mmHg, hydralazine 5 mg intravenously was administered. At the same time Brain CT Scan was performed for the patient and there was no haematoma, space-occupying lesion or hydrocephalus. Under general anaesthesia patient underwent cesarean section and delivered baby boy, weighing 3300 grams. First and 5 minutes Apgar scores were 9 and 10 respectively. Placenta was normal. Patient was transferred to ICU due to hypertension. BRAIN MRI, MRA and MRV were performed, there was no abnormal finding. The patient was hospitalized for 5 days. During this time, blood pressure was under control. The symptoms of abducens nerve palsy including; headache and diplopia resolved after 5 days and patient was discharged from the hospital in good general condition.

DISCUSSION

Abducens nerve palsy during pregnancy is extremely rare [1,2] We searched Medline, Scopus and Google Scholar. From 1968 to 2015, only 9 cases have been reported in the literature. Five cases of abducens nerve palsy happened during pregnancy [2-6], four cases happened postpartum [1,7-9] and one case was in second trimester [4] also, two cases did not have high blood pressure. The rest cases happened after 36 weeks of pregnancy the same as

our case. Symptoms of our patient resolved within 5 days that was the same as the studies by Thamban and Fung in which patient's symptoms resolved in less than one week [3,6].

The abducens nerve has a long way from the brain stem to the lateral rectus muscle in the orbit, so paralysis may result from any lesion of the nerve between the pons and orbit [1,3,6].

Sixth nerve palsy without neurological problems usually occurs in adults with risk factors such as hypertension, atherosclerosis and diabetes. Most reported the etiologies for abducens nerve palsy as follow; vasculopathy 29%, tumours 16%, multiple sclerosis 12%, presumed inflammation 8%, trauma 6%, postlumbar puncture 4% and orbital amyloidosis 2% and 22% had no determined cause of sixth-nerve palsy [10]. In a case reported by Donaldson hypertension was the cause of transient isolated sixth nerve palsy [11].

The real cause of abducens nerve palsy associated with high blood pressure during pregnancy remained unknown [2]. However, reasons such as increased intracranial pressure, tumour, pseudotumour cerebri and meningitis have been proposed. Therefore, downward displacement of the nerve may be the reason for abducens nerve palsy [1-3]. Among other causes of abducens nerve palsy, bleeding or infarction in the nucleus of abducens nerve should be considered. Since preeclampsia can cause severe vasoconstriction therefore, severe vasospasm of supplying vessels of 6th cranial nerve can cause ischemia and nerve paralysis [1-3].

In our case the symptoms of the abducens nerve palsy resolved completely after 5 days. In previous studies the patient's symptoms completely resolved within a maximum of 6 months. It seems that abducens nerve palsy in preeclampsia is benign and spontaneously resolves over time without specific treatment. Considering the pathological causes of abducens nerve palsy it seems that imaging is necessary to rule out the pathological lesions.

CONCLUSION

Abducens nerve palsy in preeclampsia is rare and has been reported most often in the late pregnancy. In case of no specific pathology, the recovery process is benign and over time its symptoms spontaneously resolved without any further treatment.

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Date of Submission: **Jun 13, 2016**
Date of Peer Review: **Jul 08, 2016**
Date of Acceptance: **Sep 12, 2016**
Date of Publishing: **Dec 01, 2016**

FINANCIAL OR OTHER COMPETING INTERESTS: None.