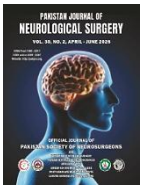

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Case Report

Idiopathic Intracranial Hypertension with 6th And 7th Cranial Nerve Palsy

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ABSTRACT

Background: Pseudotumor cerebri or Idiopathic Intracranial Hypertension (IIH) is a rare condition noted in children and adults; however, it is more common in females of childbearing age, with a female-to-male ratio of 8:1[1, 2]. The common typical symptoms of IIH are headache, transient blurring of vision, while others are visual loss, diplopia, and pulsatile tinnitus.[3,4] We presented a case of IIH with cranial nerve palsies.

Case Report: A 30-year-old female patient presented with nausea, vomiting, headache, visual deterioration, and an uncommon presentation of 6th and 7th cranial nerve palsy, diagnosed as a case of IIH. On further examination and systemic investigation, there was also an associated undiagnosed polycystic ovarian disease. The purpose of this case is to highlight two important and uncommon factors, such as 7th cranial nerve palsy and polycystic ovarian disease, that existed in this case of idiopathic intracranial hypertension.

Keywords: Idiopathic Intracranial Hypertension, Cranial nerve palsy, Visual loss.

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INTRODUCTION

Pseudotumor cerebri or Idiopathic Intracranial Hypertension (IIH) is a rare condition noted in children and adults. It is more common in females of childbearing age, with a female-to-male ratio of 8:1.[1,2] The typical symptoms: headache,[3,4] transient blurring of vision are reported in about 70% of patients. Visual loss, diplopia (horizontal > vertical direction), pulsatile tinnitus, and a small percentage of patients present with cognitive deficit and CSF rhinorrhea. We presented a case of IIH with cranial nerve palsies.

CASE PRESENTATION

We presented a case of 30 years old female, married for 1 year, not pregnant, with a history of oligomenorrhea and obesity. The patient presented to the neurosurgery OPD of PAF

Hospital, Islamabad, with complaints of headache and vomiting for the last 1 month. The headache was generalized, continuous, and severe in intensity. There were no aggravating factors, but the headache was relieved with simple analgesics. And there was no particular relation of headache with any specific time of the day. The vomiting has no relation to food intake, and after vomiting, the patient had temporary relief of headache. Furthermore, the patient had vomiting in the mornings most of the time. Another chief complaint of the patient was visual issues, which started after 10 days of headache and vomiting. The patient complained of sudden vision deterioration in both eyes. On examination, the patient had visual acuity in the right eye as light perception. Furthermore, the patient also had facial palsy on the left side. As well as restriction of eye movement, abducens nerve palsy was identified in the left eye. After detailed counselling and consent from the patient, admission was advised for the patient. After the admission, conservative treatment started in the form of IV analgesics, antiemetics, acyclovir, and steroids. Ophthalmological examination showed bilateral papilledema, and on lumbar puncture, opening pressure was 35mm Hg. The rest of the laboratory investigations were within normal limits. MRI and MRV of the brain were also done, which came out to be normal. The patient was diagnosed with a case of Idiopathic intracranial hypertension and Grade 5 on the Friedman criteria. After optimization for general anesthesia, surgery (Lumbo-peritoneal shunt placement) was performed. Postoperatively, the patient's vision improved, and abducent nerve palsy resolved. Her facial palsy also improved. Headache and vomiting were rectified at the time of discharge. After 5 days of hospitalization, the patient was discharged on oral medications. At the final follow-up at 6 months post-operatively, the patient had no active issues.

DISCUSSION

There are several causes of Pseudotumor cerebri identified in the literature; among them, obesity and weight gain are the relevant or key players. According to Anthony B Daniels[5,] obesity and weight gain are associated with a greater risk of IIH. In our case, such findings are compatible with Anthony et al, as in our case, the patient was having a BMI of 32, with a recent history of weight gain.

The unusual presentation of idiopathic intracranial hypertension with polycystic ovarian disease, which was also noted in our patient and enlightened by Albarrak et al,[6] in their case report, "Uncommon Presentation of Idiopathic Intracranial Hypertension in a Patient with Polycystic Ovary Syndrome: A Case Report". This association highlights the importance of early detection of papilledema and prompt management, which leads to a better prognosis for the patient.

Sudden vision deterioration suggests fulminant idiopathic intracranial hypertension, which needs instantaneous management, including LP shunt or optic nerve sheath fenestration and IV steroids. Madhav et al, in their article 'Fulminant idiopathic intracranial hypertension,[7] reported that due to prompt intervention, headache and vision improved as; vision in 50% cases, but no improvement in visual field. In our case, prompt surgical management in the form of lumbo-peritoneal shunt was associated with a favorable outcome, as the patient's vision improved, headache and vomiting resolved, and restoration of eye abduction and field defect.

Facial nerve palsy is very rarely associated with Idiopathic intracranial hypertension. David et al,[8] reported two cases of Idiopathic intracranial hypertension with facial nerve palsy, treated with steroids in one, and emergent optic nerve sheath fenestration in the other. The cranial nerve palsies resolved in both cases. Our patient also showed improvement in left facial palsy after receiving a steroid and lumbo-peritoneal shunt surgery.

Combined 6th and 7th cranial nerve palsy in pseudotumor cerebri in 13 years old girl is reported by Cindy et al.[9] According to that case report, the patient improved with acetazolamide. However, our patient's improvement was accomplished by performing a lumbo-peritoneal shunt. Promptly performing surgery in our case was based on and justified by bilateral papilledema and visual deterioration in our patient.

CONCLUSION

Cranial nerve 6th and 7th involvement in IIH is infrequent, but it must be a part of the exclusion criteria. The pathophysiology of facial palsy in IIH is not known and likely represents a false localizing, pressure-related phenomenon. We agree with Kiwak et al,[10] that elevated ICP likely causes traction on the extra-axial facial nerve and involves chorda tympani and stapedial rami. We recommend that management should be tailored according to visual status and severity of ICP. Furthermore, lumbo-peritoneal shunt and dexamethasone should be considered in patients with unilateral facial and abducent nerve palsy, along with sudden deterioration of vision with papilledema, for the better outcome of patients suffering from IIH.

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Additional Information

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4.	M. Usman, Umer Farooq Khawaja, and Taimoor Ali	4. Interpretation of results
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