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Empty Sella Turcica and Papilloedema: Two Cases Reports

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Methods: Retrospectively review the clinical features, magnetic resonance imaging records and treatment effects of a patient using Methylprednisoslone.

Conclusions: MRI is the preferable imaging technique for patient with papilloedema.

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Methods: **Retrospectively review the clinical features, magnetic resonance imaging records and treatment effects of a patient using Methylprednisoslone.**

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I. Introduction

Sellaturcica is a saddle shaped compartment in base of the skull which accommodates the pituitary gland. The empty sellaturcicaoccurs when there is a leakage of cerebral spinal fluid(CSF) leading to flattening and displacement of the pituitary gland. When pituitary gland is flattened and MRI cannot detect the gland it is known as Empty Sella syndrome (ESS). There are two types of ESS: Primary and secondary. Primary empty sella syndrome occurs when there is defect in diaphragmatic sella allows CSF and presses the pituitary gland. Secondary empty sella syndrome occurs when the pituitary gland is damaged by some other cause like tumor, surgery or radiation therapy (Aruna et al., 2014). The prevalence of primary sella in general population has been reported to be 8-35%(Aruna et al., 2014). The incidence has been reported more in females, the ratio being 5:1(Aruna et al., 2014).

Case 1

A young male presented to us with complaint of blurring of vision and occasional double vision since 1 week. He did not complaint of headache, vertigo nor tinnitus. On examination his visual acuity in both eyes were 6/6. His eyebrows and eyelids were in normal position. Extraocular eye movement were full in all gazes except in dextroversion. Cornea and anterior chamber were normal. Pupil in both eyes were round, regular, reacting to direct and consensual light reflex equally. Lens were clear and normal position in both eyes. Vitreous were clear in both eyes. On Fundus examination of both eyes revealed disc margin blurred and elevated. Cup were obliterated. Venous pulsation were absent. Retinal veins looked engorged and tortuous. Disc hemorrhages were also seen.

Color vision test with ishihara chart were normal in both eyes. Humphrey visual field showed enlarged blind spot and pheripheralscotoma in both eyes. Diplopia charting showed uncrossed horizontal diplopia with maximum separation at dextroversion.

Haematological test showed total count, differential count, haemoglobin, within normal limit. Biochemical test showed Random blood sugar and Serum creatinine within normal limit. Serological test for HIV, HCV AND HbsAg were negative.

With above mentioned clinical findings clinical diagnosis of both eye disc edema and right eye lateral rectus paresis were made. To rule out any intracranial pathology patient was sent to perform MRI.
MRI showed partial empty sellatursica.

Patient was admitted and treated with Injection Methylprednisolone 1gm Intravenous for 3 days. Along with it Protonpump inhibitors was also given orally.

Case 2

An adult male aged 53 years presented to us with blurring of vision since 15 days in left eye. No history of redness, pain nor any trauma. There is no history of any systemic disease. On examination his vision in right eye was 6/6 and in left eye HM+(Hand movement). Extraocular movements were full in all gazes and painless. Anterior segment was normal. On fundus examination in right eye Disc was sharp margin pink in color, macula was normal with normal foveal reflex except myelinated nerve fiber layer in inferior temporal branch. In left eye disc was edematous with blurring and elevation of margin, cup was obliterated, vessels were tortuous. He was sent for MRI scan of head and orbit which showed isolated empty sella. He was admitted in hospital for intravenous methylprednisolone injection for 3 days followed by oral steroid for 11 days. Proton pump inhibitors were also given simultaneously.

The patient again appeared in our hospital after 6 month. On examination his vision in right eye was 6/6 and in left eye was HM. Extraocular movement were normal anterior segment was normal in both eyes except pupillary reaction. Relative afferent pupillary defect was noticed in left eye. On fundus examination right eye was normal. Left eye disc was pale in color,

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sharp margin, Vessels were attenuated, nerve fiber layer was thinned out.

II. Discussion

Empty sellaturcica is a rare disorder. We searched through Pubmed using EndNote 7 and found only 153 artcles since year 1955 till 2019. Very few article were retrived while searching for empty sellaturcica and papilloedema. Papilloedema caused by empty sellaturcica has been reported by Wang, Jianming (Wang et al., 2008). The empty sellaturcica is caused by intrasellar herniation of CSF resulting in flattening of the pituitary gland(Saindane et al., 2013). Papilloedema is a clinical diagnosis while empty sellaturcica is a radiological findings.

Papilloedema and clinical features of raised intra cranial pressure(ICP)would have lead us to suspect Idiopathic intracranial hypertension(IIH). However our patient did not have any symptoms of raised ICP like headache, vertigo, Tinnitus etc. Moreover our patient was male at age of 27 years and 53 years. IIH is more common in obese female aged 20-40 years.(Victorio and Rothner, 2013, Saindane et al., 2013). Increased fat in scalp and neck region seen in MRI has been described in cases of IIH(Saindane et al., 2013). Our patient did not showed such findings in MRI.

Papilloedema has also been reported in case of Harada syndrome (Nawasiwatte et al., 2012). Thanh-Thao Adriana Le reported a case of Vogt-Koyanagi-Harada (VKH) syndrome with bilateral papilloedema and neurological findings (Le et al., 2019).VKH is an autoimmune disease characterized by ocular (choroiditis), neurological (meningoencephalitis) and integumentary (vitiligo, inner ear) findings. VKH is more common in dark skin women of any age. However our both patients did not showed the sign and symptoms of VKH syndrome.

Shrestha et al reported a case of ocular cysticercosis with multiple disseminated subcutaneous nodules on the body with bilateral papilledema with multiple calcified cyst and scolex in brain on computed tomography (CT) scan(Shrestha and Shrestha, 2019).

III. Conclusion

These are two rare different presentation of empty sella syndrome with disc edema. The cause of disc edema was not known to us.

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