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Case Report

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EMPTY SELLA SYNDROME SUBSEQUENT TO POST NATAL HYPOPITUITARISM: CASE REPORT

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ABSTRACT

Sheehan's syndrome (SS), a postnatal hypopituitarism caused by sphacelus of the pituitary is typically the results of severe cardiovascular disease or shock caused by large hemorrhage throughout or once after delivery. Patients with SS have variable degrees of anterior pituitary gland endocrine deficiency. A 65-year-old women bestowed with clinical and laboratory options of endocrine, adrenal and thyroid deficiency. Endocrinological investigation showed anterior pituitary gland failure, that was in all probability a results of panhypopituitarism following blood loss throughout giving birth twenty seven years antecedently. Sheehan's syndrome was diagnosed. Computerized tomography scan of the skull revealed an empty sella. We suggest that pituitary sphacelus and involution allow penetration of spinal fluid to the sellar cavity through a defect inside the diaphragm sella, inflicting formation of associate empty sella. Its frequency is decreasing worldwide and it's a rare explanation for hypopituitarism in developed countries as a result of advances in obstetrical care. However, it's still frequent in underdeveloped and developing countries. Sheehan syndrome and empty sella syndrome typically evolves slowly and therefore is diagnosed late. History of postnatal hemorrhage, failure to lactate, cessation of menses, headache and visual symptoms are vital clues to the diagnosis. Early diagnosis and appropriate treatment are important to scale back morbidity and mortality of the patients.

KEYWORDS: Haemorrhage, postnatal hypopituitarism, Sheehan's syndrome.

INTRODUCTION

Harold Sheehan reported postpartum ischemic pituitary necrosis for the primary time 100 years ago in Przeglad Lekarshi by Leon Konrad Glinski. In majority of cases, the syndrome is a consequence of severe postpartum bleeding episode resulting in severe hypotension or haemorrhagic shock. The frequency of this has been decreased in developed countries as a result of improved obstetrical care, but this clinical entity remains a common cause of hypopituitarism in developing countries.[1] The syndrome is characterized by varying degrees of anterior pituitary dysfunction resulting from the deficiency of multiple pituitary hormones like growth hormone and prolactin, gonadotropins, ACTH and thyrotropin. Women with Sheehan syndrome exhibit a variety of signs and symptoms including failure to lactate or resume menses, loss of genital and axillary hair, and often occurring long after delivery clinical manifestations of central hypothyroidism and secondary adrenal insufficiency.[2]

The term "Empty sella" was first introduced by Bush in 1951 to describe a peculiar anatomical condition, observed in 40 to 788 human cadavers (specifically females) characterized by sella turcica with an incomplete diaphragm sellae containing only a slight peripheral surface, with a pituitary gland not absent, but flattened in such a way as to create a thin tissue layer at the bottom of the sella.[3]It is a term for the radiological finding of "Empty sellar space" on magnetic resonance imaging (MRI) and computerized tomography (CT) with a flattened pituitary and elongated stalk.[4] It can be partial if less than 50% of sellar space is filled with cerebro-spinal fluid (CSF), or complete if CSF fills more than 50% of space in the sella and gland thickness is smaller amount than 2mm. The overall incidence has been estimated at 12%. The prevalence of Primary Empty Sella (PES) is high in patients with idiopathic intracranial hypertension.[3]

CASE REPORT

A 65-year old female was present with the complaints of fever, giddiness and fatigue once started travelling in bus. She had a past history of motion sickness since childhood and PPH (post-partum haemorrhage) during her last child birth at the age of 27. Also she is a known

case of hypothyroidism and secondary empty sella syndrome, high blood pressure was observed (160/90mmHg). An initial laboratory test showed thrombocytosis with the platelet count of 457 $x10^9$/L and WBC of $14x10^9$/L, granulocytes and lymphocytes of 71.2% and 19.4%. Her hemoglobin level was 12.0g/dL with mean corpuscular volume of 86.6fL, mean corpuscular hemoglobin of 27.7pg and mean corpuscular hemoglobin value of 32g/dL. She also complained about generalized weakness. Her lipid profile resulted hypercholesterinemia with HDL of 30mg/dL, LDL of 149mg/dL, VLDL of 50mg/dL, triglycerides of 18mg/dL and total cholesterol of 240mg/dL. She had no pubic and axillary hair. In fact the patient's cortisol level was 1.9µg/dL and also having T3 of 83ng/dL, T4 of 4.1µg/dL and TSH of 5.18µIU/L. The diagnosis of sheehan's syndrome was established with the patient's medical history, physical examination and pituitary magnetic resonance images demonstrated an secondary empty sella syndrome. She received replacement therapy with Levothyroxine 100mcg/day and Inj.hydrocortisone 100mg/day (for 2 days) which was changed to Prednisolone 10mg/day.

We followed our patient for 8days after which a complete hematological recovery was noted. Accordingly the patient's hematological parameters was improved.

DISCUSSION

Prior to the hospital administration, the patient was treated symptomatically with analgesics and multivitamins for about 20 years. Clinically, she was appeared to be dazed. Hence detailed biochemical and hormonal assays were asked for. Noting the abnormal reports, MRI brain with focus on pituitary was done, in which the impression of empty sella was found. The empty sella turcica is known as an intrasellar herniation of the subarachinoid space suprasellar with pituitary gland compression. Treatment varies for the type of Empty Sella. Treatment for secondary Empty Sella syndrome requires replacing the defective hormone. [5]

CONCLUSION

There is no evidence for the diagnosis of sheehan syndrome during pregnancy as it might improve hypopituitarism by stimulating the pituitary remnant to undergo hyperplasia and stimulating placenta to secret hormone, however, pregnancy might also aggravate symptoms by stimulating autoimmune system. Early diagnosis and appropriate treatment are necessary and important.[6]

Empty sella syndrome should be kept as a differential diagnosis for patients presenting with non-specific persistent headache, fatigue and giddiness, especially in females. In each and every cases it need not to be nutritional deficiencies as commonly thought and treated.[5] Most people with empty sella syndrome have no signs, and need no care. Once symptoms occur, care is geared towards the specific symptoms in each patient. If the pituitary is compromised then replacement therapy should be prescribed when required for different hormones.[7]

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