



CASE REPORT OF EMPTY SELLA SYNDROME

Dr. Varde Jagatkumar Hareshkumar*	Junior Resident-3rd Year, Department of General Medicine, Hind Institute of Medical Sciences, Sitapur. *Corresponding Author
Dr. Nishant Kanodia	Professor And Head of Department, Department of General Medicine, Hind Institute of Medical Sciences, Sitapur.
Dr. Durga Prasad Verma	Assistant Professor, Department of General Medicine, Hind Institute of Medical Sciences, Sitapur.
Dr. Sk Nadim Sk Mahamad	Junior Resident-3rd Year, Department of General Medicine, Hind Institute of Medical Sciences, Sitapur.
Dr. Sabeeha Noor	Junior Resident-3rd Year, Department of General Medicine, Hind Institute of Medical Sciences, Sitapur.
Dr. B. Rohith	Junior Resident-3rd Year, Department of General Medicine, Hind Institute of Medical Sciences, Sitapur.

ABSTRACT **Introduction:** Empty Sella syndrome (ESS) is a symptom complex characterized by headache, giddiness, vomiting, visual field defects and endocrine abnormalities along with the radiographic appearance of an enlarged Sella turcica. **Case:** We are reporting a case of 42 years old multiparous woman presented with features of hypothyroidism with low mood diagnosed with empty Sella syndrome based on clinical symptoms and hormonal studies with radiological investigations. **Discussion** – patient presented with classical hypothyroidism features for long time and repeated hospitalization in past should be evaluate with hormonal studies to rule out causes of hypopituitarism specially in multiparous woman.

KEYWORDS : Empty Sella syndrome, Hypopituitarism, Hypothyroidism

INTRODUCTION

Empty Sella syndrome (ESS) occurs when the Sella turcica becomes fully or partially filled with CSF, pushing the normal pituitary gland. Typically, the pituitary gland is squeezed and reshaped, and the Sella is expanded.^[1] An apparently empty Sella turcica that lacks pituitary tissue is diagnosed as an empty Sella by neuroradiology or pathology. Although estimates vary from 2% to 20%, the incidence of primary empty Sella, or empty Sella.^[2] Primary and secondary ESS are the two different categories. The etiology of primary ESS is a minor anatomical defect above the pituitary gland that causes the gland to flatten along the inner walls of the Sella turcica cavity due to increased pressure in the Sella turcica.^[4] Conversely, secondary empty Sella can result from radiation, medication, surgery, autoimmune disorders, infections, trauma, and pituitary adenomas experiencing spontaneous necrosis (ischemia or bleeding).^[5-6] The type of empty Sella determines how it is treated. Since most patients with primary empty Sella are asymptomatic and have normal pituitary hormone levels, there is no particular therapy for this condition. Treatment for secondary empty Sella syndrome entails supplying the missing hormones.^[7]

CASE REPORT

A 42 years old multiparous woman came with complaints of generalized swelling, decrease appetite, weight loss since 7 years. patient had also complained of scalp hair loss, cold intolerance, wrinkles on face, low mood since 5 years. patient had also complained of amenorrhea since 2 years. patient had past history of Post Partum Hemorrhage 6 years back followed by lactational failure after her last pregnancy. On examination, patient was having bradycardia (56 bpm), Her Blood Pressure was lower side (90/60 mm Hg) and all other vitals were stable.

On General Physical Examination mild Pallor were present, scalp hair loss, dry skin, wrinkles over face were present and Breast examination was Normal. Her routine blood investigation was normal. Based on Symptoms, patient opted for Hormonal studies which is shown in table no. 1. MRI Brain showed the replacement of pituitary fossa by CSF and causing compression effect on pituitary gland suggestive of empty Sella showing in the figure 1. Based on symptoms, Blood reports and MRI findings, diagnosis was made Empty Sella Syndrome. patient was treated with Levothyroxine, Oral Prednisolone and patient responded well and discharged.

DISCUSSION

In this case, middle aged multi gravida woman has classical presentation of severe hypothyroidism and had a history of post-partum hemorrhage and lactation failure. Before she came to our hospital she was treated symptomatically with multivitamins and analgesics for 6 years with all her routine blood investigation within normal limits. In Hormonal study, serum T3, serum T4, serum FSH, serum LH, serum cortisol level was lower side and prolactin level was also lower side showing the hypopituitarism. MRI Brain was suggesting empty Sella, then diagnosis was made empty Sella syndrome. according to past case report in india , A 27-year-old male with symptoms indicative of hypothyroidism was identified with an empty Sella on MRI, and all symptoms resolved with levothyroxine medication.^[3] "Empty Sella syndrome" refers to a unique anatomical and radiological phenomenon.^[8] It is common knowledge that the phrase "Empty Sella" is inaccurate in these situations since the Sella is not empty. In reality, the pituitary gland, along with its stalk, the arachnoid, the CSF, and occasionally the optic system and third ventricle, fills it entirely. Therefore, the word "intra-sellar arachnoidocele" is selected since it clearly and simply explains the results in this entity.^[9] The majority of instances with empty Sella were attributed to PES, according to recent research and these cases were more frequently observed in females with greater parity, like our patient.^[10] Pregnancy-related pituitary enlargement may weaken the sellar diaphragm, increasing the risk of CSF fluid herniating into the Sella.^[11]



Figure 1: On Sagittal T2 weighted images of MRI brain showing Sella is expanded and filled with CSF and Infundibulum is seen coursing through CSF filled Sella suggesting Infundibulum Sign. Pituitary thickness is ≤ 2 mm. which is sign of Empty Sella.

Table No. 1 – Hormonal Study Of This Case Report

Investigation	Value	Reference Range
Serum TSH	1.254 μ IU/ml	0.3-4.5
Serum T3	0.271 ng/ml	0.69-2.15
Serum T4	5.858 ng/ml	52-127
Free T3	0.4 pg/ml	2.0-4.4
Free T4	0.038 ng/ml	0.93-1.7
Prolactin	41 μ IU/ml	66-490
serum FSH	8.75 m IU/ml	25.8-134.8
serum LH	7.15 m IU/ml	7.7-58.5
serum cortisol	3.4 ug/dl	6.2-19.4

CONCLUSIONS

Empty Sella syndrome is one of the causes of acquired hypopituitarism should be kept in differential diagnosis if patient having features of hypothyroidism since long time with low mood, amenorrhea and always do hormonal study in this type of patients to look for the hypopituitarism.

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