

## Empty Sella Syndrome with Varied Clinical Presentation: A Case Report

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**Abstract:** Empty Sella Syndrome is a condition where the pituitary gland is partially or totally absent from the pituitary fossa. It is asymptomatic in most of the cases and found accidentally in brain imaging. In symptomatic cases it presents with widespread manifestations like endocrine abnormality, visual difficulty, headache and Cerebrospinal fluid (CSF) leakage from nose. Here we report a case of 28 year old married female presented with brief episodes of alteration in consciousness, headache, low mood, menstrual irregularity and decreased libido. Several investigations were performed like Thyroid Stimulating Hormone, Prolactin estimation, Electroencephalogram (EEG), Magnetic Resonance Imaging (MRI) of brain. She was treated with Escitalopram, Thyroxine and Oxcarbazepine and responded well with the treatment.

**Keywords:** Empty Sella Syndrome, Menstrual Irregularity, Low mood, Headache

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### INTRODUCTION

Empty Sella Syndrome is a condition where pituitary gland is partially or totally absent from pituitary fossa due to shrinkage or flattening of the gland [1]. The pituitary gland sits in sella turcica which is a saddle shaped component present at the base of the skull. Reported prevalence of empty sella syndrome is 8.35 % and incidence is more common in females with a ratio of 5:1[2]. It is more commonly found in middle aged women who are obese and hypertensive [3]. Although Empty Sella Syndrome can be found commonly as incidental finding during brain studies [4], symptomatic case of Empty Sella Syndrome is rare. Symptomatic patients may develop endocrine abnormality due to pituitary damage and headache due to benign intracranial hypertension [5]. Visual field defect may be due to compression of optic chiasma and patients may also complain of amenorrhea and decreased libido due to hormonal imbalance. Complex partial seizure is the most common form of epilepsy in adult and approximately affects three of one thousand persons [6]. There may be presence of autonomic sensations like blushing, changes in respiration among preictal symptoms. Patients may also complain of lip smacking, chewing movement immediately before the episode. It is noted that substantial number of patients who are suffering from complex partial seizure have shown features of depression[6] and often complain low mood , lethargy , lack of interest in activities.

Here we present a case with features of depression and complex partial seizure and showed significant radiological changes like empty sell in

Magnetic resonance imaging along with hormonal changes which are not common and significant for treatment purpose.

### CASE REPORT

A married 28 year old Muslim female from rural area presented with brief episodes of alteration in consciousness with features like fullness in the stomach, blushing along with lip smacking and chewing movements immediately before the episodes. She complained that such type of episodes is happening for last six months with a frequency of two to three times in every week. There were no features of tongue bite, involuntary micturition or injury due to fall during such episodes. She also complained of low mood and headache for last few months. She stated that she was not getting interest in activities and becoming fatigue very easily. She complained of sleep disturbance particularly early morning awakening and loss of appetite for last one month. She also informed that she is having menstrual irregularity with decreased duration and flow for last few months .She informed that she was experiencing decreased libido in recent time. There was no obvious history of any visual difficulty.

She presented in the outpatient department with her mother and she was mildly overweight and in well kempt state. She was cooperative during interview and mental status examination revealed depressive thought contents without any suicidal ideation and guilt phenomenon. There was no perceptual anomaly and she was having grade V insight. A detail ophthalmological evaluation was done to rule out any visual abnormality.

Blood biochemistry investigations revealed high Thyroid Stimulating Hormone level 25.6 mIU/ml (Reference range: 0.35-6.15 mIU/ml) along with increased prolactin 41.10 ng/ml (Reference Range: 3.8-23.2 ng/ml) and these are significant findings. Biochemical analysis also revealed normal level of Follicular Stimulating Hormone and Luteinizing Hormone. Electroencephalogram report for this patient was within normal limit but Magnetic resonance imaging of brain suggests features of empty sella due to atrophy of the pituitary gland. (Fig: 1)

She was treated with Escitalopram 10 mg and Thyroxine supplementation was done. Oxcarbazepine was started with low dosage and increased up to 900 mg daily for treatment of seizures after neurological consultation. She responded well with treatment and her mood symptoms improved and got relief from seizure episodes as the time progressed. She was also treated with psychotherapy for her depressive symptoms. She was referred to Gynaecology department for her menstrual complications. She was advised to continue medicines and for regular follow up.



Fig-1: Empty sella in MRI

## DISCUSSION

The case reported here showed significant hormonal changes like increased Thyroid stimulating hormone, Prolactin value along with normal Follicular Stimulating Hormone, Luteinizing Hormone. Alteration in the level of Prolactin, Thyroid stimulating hormone is responsible for her gynaecological complications like irregular menstruation and decreased libido. These alterations in hormonal levels can be managed with medication and regular follow up. She presented with features of altered consciousness along with lip smacking and chewing movements and these are suggestive of complex partial seizure though her Electroencephalogram was within normal limit. Multiple normal Electroencephalogram are often obtained in persons with complex partial seizure. Therefore normal Electroencephalogram cannot be used to exclude complex partial epilepsy. She complained of low mood, lethargy, and other features of depression which are common along with features of complex partial seizure. Neuroimaging suggests Empty sella due to atrophy of the Pituitary gland. Primary Empty sella syndrome is due to defective development of diaphragm sellae, with arachnoid herniation to the pituitary fossa due to increased intra cranial pressure [7], which is

found mostly in young people [8]. Secondary Empty sell syndrome is due to infarction or atrophy of pituitary gland and usually found in obese and middle aged women.

All hormonal changes may be due to absence of Pituitary gland and it indicates the necessity of detail neuroimaging and later on hormonal estimations if required in patients presenting with features suggestive of seizures or abnormal presentation of psychiatric illness for appropriate diagnosis and management.

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