



Empty Sella Syndrome Presented with Schizophrenia: Case Report

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Abstract

Empty sella is radiological term where the pituitary gland shrinks or becomes flattened, filling the sella turcica with cerebrospinal fluid on imaging instead of the normal pituitary. Common symptoms were headaches, visual disturbances, chronic fatigue, galactorrhea, secondary infertility, weight gain. Schizophrenia is the most common functional psychotic disorder, and individuals with the disorder can present with a variety of manifestations. There is much unknown about the neurobiology of psychiatric disorders. In this case report present a young patient with empty sella turcica presented with psychotic symptoms diagnosed as schizophrenia. It is possible that both conditions could result from the same genetic origin.

Introduction

Empty Sella Syndrome (ESS) is a disorder that involves the sella turcica, a bony structure at the base of the brain that surrounds and protects the pituitary gland [1]. Empty Sella Syndrome (ESS) is where the pituitary gland shrinks or becomes flattened, filling the sella turcica with cerebrospinal fluid on imaging instead of the normal pituitary [2]. There are two types of ESS: primary and secondary. Primary ESS happens when a small anatomical defect above the pituitary gland increases pressure in the sella turcica and causes the gland to flatten out along the interior walls of the sella turcica cavity. Secondary ESS is the result of the pituitary gland regressing within the cavity after an injury, surgery, or radiation therapy [3]. The cause of primary empty sella syndrome is a congenital defect (Diaphragma Sellae). Secondary empty sella syndrome happens when a tumor or surgery damages the gland, this is an acquired manner of the condition [4]. Common symptoms were headaches, visual disturbances, chronic fatigue, galactorrhea, secondary infertility, weight gain [1]. The major differential to consider in empty sella syndrome is intracranial hypertension, of both unknown and secondary causes [5].

Case Presentation

A 24 years male, single, unemployed, low educated, with 2 brothers, 4 sisters, his rank 6th. Premorbidly well-functioning with no family history of mental illness being reported and no history of substance and alcohol abuse, recently visited the psychiatry outpatient department along with his mother, against his will few days after disorganized behavior. His mother was surprised when he suddenly entered his home wearing a woman's wedding suit with full bride-like makeup. Also she stated that he involved in many quarrels with other family members. He presented with disorganized speech, behavior, low mood, and visual hallucination of religious theme, feel watched by others that try to harm him. No auditory hallucination, grandiose delusion, insomnia, poor appetite, aggressive bouts, Suicidal and homicidal threats, social isolation. His condition was associated with headache, decreased visual acuity, rhinorrhea.

Past psychiatric history: multiple episodes of disorganized behavior, impulses, wondering, but without psychiatric consultation. No past medical and surgical history.

Personal history: he was born by caesarian section delivery, no history of hospitalization, no jaundice, no seizures, no delayed mile stone, enter school at 7 years of age, good relation with peer and teachers, Poor school performance, leave school at 10 years age at 4th primary class. Have history of head trauma, loss of consciousness for 30 min, admitted to hospital. Work as clean worker at age 22 years, good performance, but left job under pressure of his brother.

Premorbid personality: anxious, fearful, with no forensic history.

On mental status examination he was look healthy, in his age, conscious and oriented with

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poor eye contact, decreased psychomotor activity and talk, guarded about revealing the details of his persecutory ideas and described visual hallucinations of seeing holy Imam, maintained attention, concentration, and immediate memory with partial insight, dressing well, cooperative coordinated, touch with surrounding, try to express himself, coherent relevant speech, fluent, low tone, slow rhythm, monotonous, low volume, low pitch, good quantity, with difficulty in articulation like hot potato speech. Low mood, restricted affect, No formal thought disorder, Suicidal ideation, Homicidal ideation, grandiose delusion and persecutory delusion.

His investigations revealed the thyroid stimulating hormone (TSH) levels, T4 levels, T3 levels within normal range. Morning serum cortisol and serum testosterone levels within normal range. His routine blood examination, routine urine examination, routine blood sugar, serum sodium, calcium, bicarbonate and potassium, renal and liver function test, and lipid profile were normal. Growth hormone, follicular stimulating hormone, and luteinizing hormone were normal. CT scan of the head and Magnetic resonance imaging scan revealed an empty sella.

Differential diagnosis: Psychosis secondary to another medical condition (DSM-V) and Schizophrenia Spectrum Disorder (DSM-V) [6].

Treatment: Patient put on olanzapine 10 mg at night for his psychotic symptoms with resulting improvement of the symptoms. Outcome and follow-up outpatient card record was done for follow up appointments.

Discussion

The case report of patient with empty sella turcica presented with psychotic symptoms that was diagnosed as schizophrenia since he met the DSM-V criteria for diagnosis of schizophrenia. Empty Sella syndrome (ESS) is where the pituitary gland shrinks or becomes flattened, filling the sella turcica with cerebrospinal fluid on imaging instead of the normal pituitary [3]. ESS can be found in the diagnostic workup of pituitary disorders, or as an incidental finding when imaging the brain [7]. Schizophrenia is a debilitating mental illness that affects 1% of the population in all cultures [8]. The term schizophrenia was introduced by Bleuler over a hundred year ago to describe the breaking up or splitting of psychic functioning he observed in these patients and the diagnosis of this disorder is still based exclusively on clinical symptoms [9]. As we progress through the 21st century, we are looking for understanding the neurobiology behind the psychiatric illnesses [10]. Schizophrenia is the most common functional psychotic disorder, and individuals with the disorder can present with a variety of manifestations [9]. The heritability of schizophrenia is substantial, but the etiology of the disorder is poorly understood [11]. Empty sella is a radiographic term [11]. Some reviews showed progressive brain changes in schizophrenia but there was no evidence of any relationship between schizophrenia and empty sella in the literature

[12]. Although historically not much evidence were found to support any correlation between Schizophrenia and ESS, case report of a set of monozygotic triplets, with schizophrenia with ESS was found, which discuss possible correlation between the two [13]. The triplets with similar psychotic symptoms were found to have empty sella turcica in MRI findings, along with other identical abnormalities, suggesting a common genetic origin of ESS and schizophrenia [12].

Conclusion

Empty sella turcica among patients with schizophrenia may be incidental radiological finding. It is possible that both conditions could result from the same chromosomal alteration.

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