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Clinical Psychiatry

2015
Vol. 1 No. 2: 6

A Case of Sheehan's Syndrome Developing Mania Following Low Dose Corticosteroid Therapy

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Abstract

Sheehan's syndrome (Postpartum pituitary necrosis) is a rare complication of postpartum hemorrhage first described in 1937. Patients with Sheehan's syndrome usually present with clinical features of anterior pituitary hormone deficiency. Psychiatric manifestations of Sheehan syndrome has rarely been studied systematically. We are presenting a case of a young female with manic symptoms who has recently been diagnosed as a case of Sheehan's Syndrome. Patient developed manic symptoms after getting low dose corticosteroids. Patient was managed with low dose steroid, thyroxin and antipsychotics.

Psychiatric manifestations might be presenting feature or might appear later in course of the disease process. They might be manifestations of the disease process itself, or may be generated as complications of treatment.

Keywords: Sheehan's syndrome, Hypopituitarism, Intrapartum hemorrhage, Corticosteroid, Mania

Received: August 31, 2015, **Accepted:** October 17, 2015, **Published:** October 20, 2015

Introduction

Post-partum pituitary necrosis, commonly known as Sheehan's syndrome contributes to 0.5% cases of hypopituitarism in women. It was first described in [1]

1. Although the incidence of Sheehan's syndrome in developed countries is declining due to advanced obstetric care, it's one of the common causes of hypopituitarism and related maternal morbidity and mortality among women in developing countries.

2. Patients with Sheehan's syndrome usually present with clinical features related to have varying degrees of anterior pituitary hormone deficiency such as Growth Hormone (GH), Follicle Stimulating Hormone (FSH), Luteinizing Hormone (LH), Thyroid Stimulating Hormone (TSH), and Adrenocorticotropic hormone (ACTH).

3. Corticosteroids are commonly used in Sheehan's syndrome but can result in troubling psychiatric side-effects particularly after high-dose corticosteroid treatment. We are presenting a case of this case of a 27 years female with Sheehan's Syndrome, who develops mania following initiation of low dose corticosteroid therapy. Written informed consent was obtained from the patient for publication of this case report.

Case presentation

A 27 yrs old female of lower socioeconomic status, hailing from a rural area presented to Psychiatry outpatient department with history of increased amount of speech, irritability, using abusive language, big talks, speaking language (English) which she never used previously for regular conversation, occasional singing, fluctuation of mood, suspiciousness, reduced sleep and refusal to take food for last 1 week. There was no prior history of mood episodes and no family history of any psychiatric illness. Patient was pre morbidly well adjusted.

Detailed history revealed that patient delivered twin baby (one live & one still born) 10 months back through emergency lower uterine caesarean section, which was performed due to obstructed labour and intrapartum haemorrhage. She was managed conservatively by 3 units of blood transfusion. Few days after delivery patient developed vomiting 5-6 times in a day which mostly occurred after taking food. It was associated with generalised weakness, malaise, headache, lactational failure, amenorrhoea and hoarse voice. For all these symptoms she was transferred to another hospital where USG was performed which revealed GB calculi for which she was advised laparoscopic cholecystectomy but family members refused to undergo another operation. But due to persistence of symptoms she was

undergone laparoscopic cholecystectomy 8 months later. But despite cholecystectomy she showed no improvement.

Due to persistence of symptoms she was finally admitted to general medicine indoor of our institution. General physical & systemic examination was within normal limit. Routine investigation revealed: Haemoglobin 10.2%, Total Leukocyte Count 4400/µL, Fasting Blood Glucose 72 mg/dL, Urea 16 mg/dL, Creatinine 0.8 mg/dL, Sodium 132 mEq/L, Potassium 3.8 mEq/L, Calcium 8 mg/dl and Liver Function Test within normal limits. Urine routine & microscopic examination was normal. Further detailed hormonal analysis found low level of hormones either secreted by anterior pituitary, or whose secretions are stimulated by anterior pituitary hormones. The details of these are demonstrated in following [Table 1].

She was diagnosed clinically as Sheehan's syndrome and put on Hydrocortisone 20 mg at morning & 10 mg at evening. After 48 hrs Levothyroxine 25 mcg was added. Patient was symptomatically improved and discharged with a pending MRI brain report.

8 days after starting of Hydrocortisone, patient developed behavioural abnormalities for which she visited Psychiatry OPD and then was admitted to our indoor. On admission, patient was hypotensive, as blood pressure was 70/60 mmHg. General physical & systemic examination was within normal limit. MSE revealed irritable affect, pressure of speech, delusion of grandiosity, affective lability and persecutory delusion. During first day of hospitalisation patient developed hypoglycaemia which was managed with 25% dextrose infusion. Endocrinology consultation was sought and advised to continue Hydrocortisone and Levothyroxine at same doses. Along with that, she was also given Haloperidol 5 mg twice daily and Lorazepam 2 mg twice daily orally. In the meantime, MRI brain report revealed sella apparently partially empty with small hypo intense area seen on right side likely partial volume or small micro adenoma. Patient dramatically improved within next 2 days. She was discharged in a stable condition [2-4].

Discussion

Sheehan's syndrome is a postpartum hypopituitarism caused by necrosis of the anterior pituitary gland due to decreased blood volume [5]. It occurs as a result of severe hypotension or shock secondary to massive bleeding during or just after delivery. The underlying process leading to Sheehan's syndrome is the infarction of the physiologically enlarged anterior pituitary lobe (due to hyperplasia of prolactin secreting cells from elevated estrogen secretion) and secondary to the compression the blood vessels supplying the gland by the enlarged gland itself or due to grossly decreased blood supply during intra-partum or postpartum events. Although other etiologies such as vasospasm, autoimmunity, small sella size, and disseminated intravascular coagulation may also have role in the development of Sheehan's syndrome, none has been conclusively proven [6].

It can present during postpartum period or several months or years following delivery. The mean duration between postpartum bleeding and the subsequent development of symptoms varies from 1 to 33 years [7]. Patient usually present with lactation failure following delivery, cessation of menstrual periods, generalized weakness and debility, premature wrinkling of the forehead and face, genitals and body hair loss, and coarse dry skin. Rare clinical presentation includes acute circulatory collapse, congestive cardiac failure, hypoglycaemia, diabetes insipidus, or psychosis.

Psychiatric manifestations of Sheehan syndrome has rarely been studied systematically and mostly isolated case reports exist in this field. Various authors have reported cases of Sheehan syndrome or hypopituitarism associated with psychiatric illnesses like Major Depressive Disorder and Psychosis. The etiopathological basis of such associations is poorly understood, might be resulting from effect of sudden drop of several hormones on brain [8-12].

Corticosteroids are widely used in modern medicine but can result in troubling psychiatric side-effects. It's one of the mainstays of treatment in Sheehan's syndrome. The psychiatric complications associated with corticosteroid treatment include mood disorders (hypomania, mania, mixed states, depression), anxiety and panic disorder, suicidal thinking and behaviour in the context of affective syndromes or delirium, aggressive behaviour, insomnia and agitation with clear consciousness, depersonalization; and, isolated cognitive impairments (impaired attention, concentration, memory and word-finding difficulties. The psychiatric symptoms typically come on within 1–2 weeks after starting high-dose corticosteroid treatment. A definite dose response relationship exists in steroid induced psychosis, with higher doses more likely to induce psychosis. One study described 18 patients who developed mood disorders or psychosis after receiving 30-60 mg/day of prednisone-equivalent. Another study reported that all patients with corticosteroid-induced psychosis were taking prednisone 0.75–1.0 mg/kg/day. The pathophysiological mechanisms giving rise to the psychiatric symptoms associated with corticosteroid treatment remain unclear. Many probable mechanisms have been proposed like corticosteroid effects on dopaminergic and cholinergic systems, decreases in serotonin release, and toxic effects on hippocampal neurons or on other brain regions [13-15].

Our patient's clinical features, biochemical parameters &

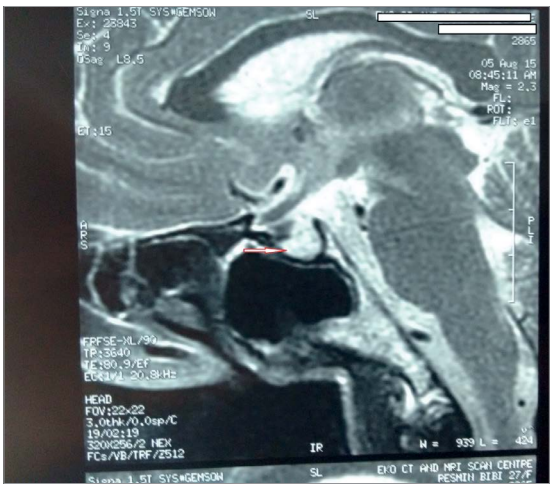

Figure 1 MRI brain of the patient showing empty sella.

neuroimaging finding were consistent with Sheehan's syndrome. She developed a manic episode with psychotic symptoms few days after administration of Hydrocortisone 30 mg, which is equivalent to 7.5 mg of Prednisolone. There are three possible etiologies of manic episode in this patient:

It might be a manifestation of the Sheehan syndrome itself, which appeared late compared to physical symptoms.

It might have been induced by Hydrocortisone. This patient might had underlying vulnerability for development of psychosis secondary to a sudden drop in the levels of hormones. Exposure to steroid in even low dose might have an additive effect leading to unmasking of the manic episode. It might be an independent episode.

Conclusion

A high index of suspicion and clinical acumen are needed to diagnose Sheehan Syndrome. Psychiatric manifestations might be presenting feature or might appear later in course of the disease process. They might be manifestations of the disease process itself, or may be generated as complications of treatment with corticosteroid. It can be another independent diagnosis also. Appearance of manic symptoms after such low dose of corticosteroid makes the case unique. Early diagnosis and treatment of the psychiatric problems with psychotropic as well as treatment of the Sheehan Syndrome with hormone supplementation is absolutely necessary to prevent morbidity and mortality. Keen monitoring of the treatment and the course of the illness is also of utmost importance to detect new symptoms and thereof, to take appropriate measures.

References

1 Sheehan HL (1937) postpartum necrosis of the anterior pituitary. J Pathol bacteriol 45: 189-214.

2 Dash RJ, Gupta V, Suri S (1993) Sheehan's syndrome: clinical profile, pituitary hormone responses and computed sellar tomography. Aust N Z J Med 23: 26-31.

3 Ozbey N, Inanc S, Aral F, Azezli A, Orhan Y (1994) Clinical and laboratory evaluation of 40 patients with Sheehan's syndrome. Isr j Med Sci 30: 826-829.

4 Lewis DA, Smith RE (1983) Steroid-induced psychiatric syndromes. A report of 14 cases and a review of the literature. J Affect Disord 5: 319-332.

5 Kovacs K (2003) Sheehan syndrome. Lancet 361: 520-522.

6 Kelestimur F (2003) Sheehan's syndrome. Pitutary 6: 181-188.

7 Huang YY, Ting MK, Hsu BR, Tsai (2000) JS: Demonstration of reserved anterior pituitary function among patients with amenorrhea after postpartum haemorrhage. Gynecol Endocrinol 14: 99-104.

8 Qadri MI, Mushtaq MB, Qazi I, Yousuf S, Rashid (2015) A Sheehan's Syndrome Presenting as Major Depressive Disorder. Iran J Med Sci January 73-76

9 Kale K, Nihalani N, Karnik N, Shah N (1999) Postpartum psychosis in a case of sheehan's syndrome. Indian J Psychiatry 41: 70-2.

10 DIssanayake SAW, Leiberman DM (1969) Hypopituitarism with paranoid psychosis: a description of two cases. J Neurol Neurosurg Psychiat 32: 233-235.

11 Hanna SM (1970) Hypopituitarism (Sheehan's syndrome) presenting with organic psychosis. J Neurol Neurosurg Psychiat 33: 192-193.

12 Shoib S, Dar MM, Arif T, Bashir H, Bhat MH (2013) Ahmed J Sheehan's syndrome presenting as psychosis: a rare clinical presentation. Medical Journal of Islamic Republic of Iran 35-37.

13 Wada K, Yamada N, Sato T et al. (2001) Corticosteroid-induced psychotic and mood disorders: diagnosis defined by DSM-IV and clinical pictures. Psychosomatics 42: 461-466.

14 Appenzeller S, Cendes F, Costallat LT (2008) Acute psychosis in systemic lupus erythematosus. Rheumatol Int 28: 237-243.

15 Kenna HA, Poon AW, Angeles CP, Koran LM (2011) Psychiatric complications of treatment with corticosteroids: Review with case report. Psychiatry and Clinical Neurosciences 65: 549-560