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#### **Original Articles**

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#### Case Report

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# Successful management of Sheehan's syndrome mimicking schizophrenia in a 36 years old female

Sadia Afrin Shampa, Md. Sultan - E - Monzur, Fahima Sharmin Hossain, Md. Khairul Islam, Muntasir Maruf, Mohammad Tarigul Alam

**Abstract:** Sheehan's syndrome (SS) denotes to the occurrence of varying degree of hypopituitarism after childbirth. Nowadays it's a rare cause of hypopituitarism in developed countries due to advancements in obstetric care. But the underdeveloped and developing countries still have higher number of SS due to poor healthcare services and poor obstetric management. SS may present in post-partum period or several years after delivery. Reports of SS with psychotic manifestations is rare. It's a case report of a 36 years old woman presented with psychotic features after childbirth. She had a history of post-partum hemorrhage. Antipsychotics were applied but there was no improvement. Treatment with thyroxine and glucocorticoids resulted in complete remission and returning back to normal functioning as before.

**Declaration of interest:** None

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**Keywords:** Sheehan's syndrome; post-partum onset; female; rare disorders.

#### Introduction

Sheehan's syndrome (SS) denotes to the occurrence of varying degree of hypopituitarism after childbirth. SS may present in post-partum period or several years after delivery. Blood loss during child birth is normal if it is less than 500 ml. excessive blood loss during or after childbirth can end up in necrosis of anterior pituitary. This phenomenon is termed as Sheehan's syndrome (SS).

The underlying cause leading of Sheehan's syndrome is the infarction of the physiologically enlarged anterior pituitary lobe. This occurs due to hyperplasia of prolactin-secreting cells of anterior pituitary during pregnancy.<sup>4</sup> Secondary cause is the compression of the blood vessels supplying the gland by the enlarged gland itself. Another reason is due to grossly decreased blood supply during intrapartum or postpartum events. Few other etiologies include vasospasm, autoimmunity, small sella size and disseminated intravascular coagulations.<sup>5</sup> SS can present during the postpartum period or several months or years following delivery. A study in France showed a delay of 9±9.7 years in the diagnosis,6 and a longer delay of 20.3±8.3 years was noted in developing countries.7 Women with SS have different degrees of hypopituitarism, oscillating from panhypopituitarism to only selective pituitary insufficiencies.8,9

### Case Report

Mrs. A, a 36-year-old housewife and mother of two children came to National Institute of Mental Health (NIMH), Dhaka, in February 2021. She was accompanied by her family members. She had the complaints of irrelevant speech from time to time, irritability, poor self-care, undue suspiciousness with fearfulness and severe weakness for around 6 years. Patient's husband stated she was having fit like attacks few times in a year for last 6 years. but frequency of fit like attack had increased to 2-3 times per week for last 2 months.

On inquiry patient's husband stated she was all well 6 years ago. Her problems started after her last child birth. It was a home delivery and during the delivery she lost large amount of blood and got admitted in the hospital. There she received 4 bags of blood, she was taken home after eight days. Within a month her family members started to notice the changes in her behavior, she was talking irrelevant things with self-muttering. She started neglecting her last child along with her duties as housewife. Patient was fearful and anxious that people wanted to harm her. In home she used to stay in her room with this fear.

She and her husband also stated she was having lathery,

constipation, hair fall, cold intolerance, dizziness in last 6 years. She was also suffering from vomiting and anorexia time to time. She had lactation failure and amenorrhea for same duration.

When detailed history on her seizure was taken, she stated it was not with any aura, also no history of childhood onset of seizure was noted. Seizure was generalized with frequency of 2-3 times per week for last 2 months. Each episode lasted for more than 20 minutes. Her husband stated that she was also having seizures few times in last 6 years but the frequency has increased recently.

Her physical examinations gave clue for hypothyroidism and primary lab work showed gross electrolytes imbalance specially hyponatremia. As there was also amenorrhea and lactation failure that implicated other endocrinopathies. Relevant investigations were in favor of endocrine disorder. It showed she had hypothyroidism as TSH was low and T3, T4 was low, had low prolactin level and her blood sugar indicated she was having hypoglycemia. Also, she had elevated serum Alanine Transaminase (ALT). There was no past history of psychiatric illness or neurological illness in her or her family members

Physical examination revealed a pale and apathetic patient, her body was swollen but it was nonpitting in nature, had baggy eye lids with loss of outer one third of the eyebrow, skin was cold, rough, lost her pubic and under arm hair, patient's eyebrows were thin. Breast atrophy was present, her blood pressure was 80/60 mm Hg, pulse was 72 beats per minutes.

Table 1: Results of blood investigations in the female patient with Sheehan's syndrome

Blood investigation	Result
Hemoglobin	9.8 g/dl
Total WBC count	6750/cumm
RBC count	$3.29~\mathrm{m/\mu L}$
Platelet count	277000 /uL
Random blood sugar	3  mmol/L
Potassium (K+)	$3.4 \; \text{mmol/L}$
Sodium (Na+)	$113 \; \text{mmol/L}$
Chloride (CI+)	$86.8 \; \mathrm{mmol/L}$
Serum total cholesterol	136 mg/dl

Mental status examination revealed the followings: appearance showed gross neglect in self-care. Her speech was irrelevant and incoherent and sometimes poverty of speech was noted, mood was depressed and affect was restricted but congruent. She had persecutory delusions. She was oriented only to person and demonstrated impairments in attention, concentration and memory. While talking about it she got anxious. She had poor understanding of why she was brought to hospital.

Table 2: Hormonal profile of the patient with Sheehan's syndrome

Hormone	Result	Reference value
FT4	0.32 ng/ml	0.7-1.53 ng/ml
FT3	6.6 pg/ml	230-619 pg/ml
Serum TSH	$0.28~\mathrm{mlU/L}$	0.5-5 mlU/L
Serum cortisol 8 AM	1.9 μm/dl	4.2-22.5 μm/dl
FSH	$8.31~\mu IU/ml$	23.0-116.3 μIU/ml
LH	$2.8~\mu IU/ml$	15.8-54.0 μIU/ml
Prolactin	1.1 ng/ml	1.8-20.3 ng/ml

FT4-free thyroxine, FT3-free triiodothyronine, TSH-thyroid-stimulating hormone, FSH-follicle-stimulating hormone, LH- luteinizing hormone

#### Discussion

Our patient presented with disorganized speech, delusions of persecution, disorganized behavior with reduced level of functioning. As for these sorts of presentation she was treated as a case of schizophrenia for few years with different classes of antipsychotics along with mood stabilizers but no significant improvement was noted. After admission in our hospital, we went through detailed history, clinical examination and mental state examination for several times. We have also done necessary investigations of this patient. With the support of lab reports and physical and mental state examination finally we conclude these presentations are due to organic pathology.<sup>3</sup>

In this case it was Sheehan Syndrome. We started thyroxin supplementation along with hydrocortisone with the consultation of a medicine specialist. At the same time, we

stopped all antipsychotics and other medication which she was getting previously. Surprisingly we found that all the psychotic symptoms like persecutory delusions, undue fearfulness and disorganized speech was subsided dramatically less than 1 month. Not only these psychotic symptoms, other symptoms like fit like attacks, generalized weakness and anorexia had also improved.

In case of our patient, she had reduced TSH, FT3, FT4, prolactin and cortisol. SS usually begins with lactation failure and/or amenorrhea. Psychiatric symptoms are hypothesized to be caused by the complex interaction of hormonal deficiencies with metabolic and electrolyte changes in the central nervous system. Infrequently it can present as an emergency condition where circulatory collapse, leading to seizures, hypoglycemia, severe hyponatremia, congestive cardiac failure, diabetes insipidus or psychosis. Our patient had hyponatremia and hypoglycemia by which her seizures can be explained. She often complained of dizziness and frequent urination with polydipsia. These are explainable with diabetes insipidus due to antidiuretic hormone deficiency.

Time between postpartum bleeding and successive development of symptoms varies between 1 to 33 years.<sup>2</sup> Later on, features of hypopituitarism, such as secondary hypothyroidism or secondary adrenal insufficiency, become evident in a woman who had a postpartum hemorrhage.<sup>12</sup>

#### **Conclusions**

Psychosis due to SS is rare but completely reversable condition with proper hormone replacement. The importance of proper history taking is immense in women presenting with post-partum onset of psychiatric manifestations. Increase awareness and timely diagnosis can help the patients evade poor quality of life. So, clinician should pay attention in cases where women in her reproductive age with prolong period of psychosis with minimum or no improvement. Organic cause like SS should be excluded in such circumstances.

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