

Case Report

Sheehan's syndrome with hypothyroidism: a rare case report

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ABSTRACT

Sheehan's syndrome is a form of hypopituitarism caused by pituitary gland necrosis caused by hemorrhagic shock during pregnancy. It's a rare issue with a wide range of symptoms and a long time to diagnose. A 40-year-old female presented with a giddiness which was rotatory type followed by headache, vomiting associated with nausea, decreased appetite for one week. She has experienced excessive vaginal bleeding and secondary amenorrhea exists for 20 years. Patients diagnosed to have acute liver injury, hyponatremia, and acute gastritis. The thyroid profile showed hypothyroidism and the patient started on appropriate medication. Hypopituitarism due to Sheehan's disease was discovered after a thorough clinical examination, endocrine investigations, and a pituitary magnetic resonance scan. Following the start of hormone replacement therapy, she showed significant improvement. The current case demonstrates that undiagnosed Sheehan's syndrome is linked to long-term morbidity, and we want to emphasize the importance of a high index of suspicion for early diagnosis of the syndrome during routine clinical visits to avoid complications that can arise from delayed diagnosis.

Keywords: Sheehan's syndrome, Hypothyroidism, Amenorrhea, Hemorrhagic shock, Case report

INTRODUCTION

Postpartum pituitary ischemia necrosis causes Sheehan's syndrome, a form of hypopituitarism. In 1937, Sheehan became the first person to bring it up.¹ One out of every 100,000 infants are born with the condition, and it is the most common cause of hypopituitarism in developing countries.^{2,3} As many as one in every 5,000 women will suffer from Sheehan's syndrome, according to research.⁴ For example, in one Indian state, where more than half of those affected gave birth at home, the prevalence is as high as 3.1%.⁵ In some women, Sheehan's syndrome appears in the months/even years following childbirth, while in others, it appears years later.⁶ A study conducted in France found a 9.7-year delay in diagnosing Sheehan's syndrome, compared to a 20.37-year delay in developing countries.^{7,8} There is a wide range of hypopituitarism in women with Sheehan's syndrome, from complete panhypopituitarism to a more subtle selective hypopituitarism.^{9,10} Sheehan's syndrome is most commonly identified by galactia and/or

amenorrhea as early symptoms. It may appear as a life-threatening emergency with circulatory collapse, severe hyponatremia, diabetes insipidus, hypoglycemia/psychosis.¹¹ Other times, a woman who has had a postpartum haemorrhage may not be diagnosed with hypopituitarism until years later when secondary hypothyroidism/secondary adrenal insufficiency become apparent.¹²

CASE REPORT

A 40-year-old female reported to our hospital's emergency room with complaints of rotatory giddiness, headache, vomiting paired with nausea, and decreased appetite for one week. Additionally, epigastric pain, chest pain associated with palpitation, sweating, reduced urine flow, and burning micturition are all common complaints. Menarche occurred at the age of 13, first childbirth occurred at the age of 15, and abortion occurred at the age of 20, during which she endured significant vaginal

bleeding and subsequent amenorrhea. She had no prior history of co-morbidity. She was conscious and oriented during the physical examination. Her vital signs included a temperature of 99^oF a pulse rate of 96 beats per minute, a blood pressure of 130/90 mmHg, and a respiratory rate of 20 breaths per minute. She was suffering from pitting pedal edema. Other systems were examined and found to be unremarkable. Laboratory results revealed the following: anemia (Hemoglobin-10g%), hyponatremia (sodium 122 mEq/L), liver function test deranged, CPK NAC-1235, CPK MB-57, white blood cell count 5200 cells/cumm, mean corpuscular volume (MCV) 95.4 fl, creatinine 1.15 mg/dL, potassium 3.9 mEq/L, total cholesterol 287 mg/dl, triglycerides 73 mg/dl, HDL 52 mg/dl, LDL 198 mg/dl, Ft4/Ft3 0.27/1.63, FSH 5.8, LH 1.45, serum cortisol 4.04 mcg/dl. Acute liver damage, hyponatremia, and acute gastritis have been diagnosed in patients. Thyroid function tests revealed hypothyroidism, and the patient was started on suitable medication. Based on these findings, we had a strong suspicion of Sheehan's syndrome and hence advised her to take a brain MRI. As illustrated in Figure 1, brain magnetic resonance imaging (MRI) revealed an empty sella turcica. Due to the clinical indications associated with the patient's past obstetric history, the patient was started on steroids. The patient was referred to a more specialized center for endocrinology assessment. After undergoing all of these tests, she was diagnosed with Sheehan's syndrome along with hypothyroidism.

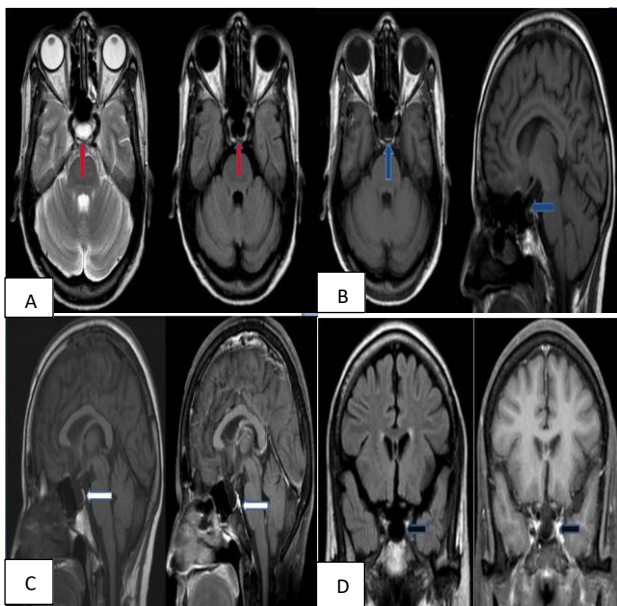


Figure 1 (A, B, C and D): Brain magnetic resonance imaging; T2/FLAIR axial sections of empty sella (red arrow), posterior pituitary bright spot is seen on T1 axial and sagittal sections (blue arrow), pre-contrast and post-contrast T1 sagittal section of empty sella (white arrow) and pre and post-contrast T1 coronal section of consistent with empty sella (Black arrow).

The patient was rehydrated with one bag of normal IV saline (NS), corticosteroid, and thyroxine replacement was

given and the patient improved. She was strictly instructed on the nature of her illness and was told to take these medications for the rest of her life. She was referred to an endocrine clinic and discharged.

DISCUSSION

The patient's history and physical examination determine the diagnosis of Sheehan's syndrome and confirm it with laboratory tests. A major diagnostic factor is a hemorrhagic shock during pregnancy. Many other abnormalities, including hyponatremia, can be found by lab tests. This is the most frequent imbalance of electrolytes in between 33-69% of cases.^{13,14} Hypopituitarism can lead to hyponatremia by numerous different processes. Diminished free-water clearance and hyponatremia may be caused by hypothyroidism. Glucocorticoid shortage, regardless of vasopressin, can also lead to reduced clearance. Antidiuretic hormone, which can also cause hyponatremia, may cause severe improper secretions and can promote the production of vasopressin alone. The amount of potassium in such circumstances is normal since adrenal aldosterone synthesis is not pituitary-dependent. In this situation, gastrointestinal loss with diarrhea and vomiting could cause the first hypokalemia reported. After the hormone substitution therapy began, the sodium level of the patient normalized, and potassium was adjusted using intravenous potassium chloride (KCL).

Anemia is well recognized as a feature of hypopituitarism. Gokalp et al recently reported hematological abnormalities in 65 patients with Sheehan's syndrome, 80% of whom presented with anemia, compared with 25% of controls.⁸ Numerous hormonal shortcomings, such as hypothyroidism, adrenal failure, and gonadal hormonal abnormalities, can explain normochromic hypopituitary anemia.¹⁵ In patients suffering from Sheehan syndrome pancytopenia is rarely noted and the rareness of this disease is revealed in a literature study. Depending on the phase of the disease, an MRI examination of the hypophysis may show distinct findings. Although early scans normally don't help in the diagnosis, they indicate a no-hemorrhagic expansion of the hypophysis, leading to their eventual involution and late scans frequently show a vacuum. A secondary, empty saddle, in the classical type of Sheehan syndrome, is considered a typical finding.¹⁶

CONCLUSION

As a result, although Sheehan's syndrome is uncommon, primary care physicians should maintain a high index of suspicion for it in patients who have had an obstetric history of intrapartum or postpartum hemorrhage. If Sheehan's syndrome is not recognized and treated early, it can result in increased morbidity and mortality. It is still necessary to conduct an extensive medical history and physical examination that is backed by laboratory tests to make a diagnosis, and doctors should be aware of disorders that are infrequently reported, such as Sheehan's

syndrome. Patients can avoid a low quality of life that can last for several years if they have increased awareness and receive a timely diagnosis. They can also avoid problems from occurring.

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