Case Report

A Diagnosis of Sheehan's Syndrome: Better Late Than Never

Aakash Pandey, Sagar Mallappa Sindagi, Harshita Singh, Paridhi Singhal, Priya Bansal, Motilal Negi

Department of Medicine, Lady Hardinge Medical College and SSK Hospital, New Delhi, India

Abstract

A middle-aged woman presented with history of fatigue, low mood, swelling of limbs, and facial puffiness. On detailed history taking, she also complained of salt craving, secondary amenorrhea, and loss of libido for almost a decade. Investigations revealed pan-hypopituitarism. She was started on appropriate hormonal therapy which saw a rapid resolution of symptoms within 2 weeks. Sheehan's syndrome may have an acute presentation or chronic. The symptoms may be subtle like fatigue or overt like hypotension and syncope. A high degree of suspicion of Sheehan's syndrome is essential for its timely management, and goes a long way in preserving the quality of life.

Keywords: *Adrenal insufficiency, depression, hypopituitarism, lactation failure, loss of libido, salt craving, Sheehan's syndrome*

Submitted: 02-Apr-2024
Revised: 06-May-2024
Accepted: 29-May-2024
Published: 05-Jul-2024

Introduction

Sheehan's syndrome was originally described by Sheehan in 1937.[1] It occurs as a result of ischemic necrosis of the pituitary gland due to severe postpartum hemorrhage. Rarely, it may be seen without massive bleeding or even after normal delivery, and lead to a delay in diagnosis.[2] Clinical presentations include fatigue, features of premature aging, dryness of skin, psychiatric disturbances, anemia, hypotension, and other evidence of hypopituitarism. It has been seen that at least 75% of the pituitary must be destroyed before hypopituitarism becomes clinically apparent. Varying degrees of anterior pituitary dysfunction occur, but symptomatic posterior pituitary function is uncommon. Deficiency of growth hormone and prolactin is seen most commonly (90–100%), whereas deficiency of cortisol secretion, gonadotropins, and thyroid-stimulating hormone is between 50% and 100%.[2]

This case report discusses a patient with complaints of fatigue, anhedonia, and generalized swelling of the body for a decade. On detailed history taking and investigations, she was diagnosed with Sheehan's syndrome and started on appropriate hormonal therapy.

Case Report

A 40-year-old woman presented with complaints of fever for 5 days which was documented (101°F–103°F), intermittent in nature and associated with chills. There was history of burning micturition also. A provisional diagnosis of urinary tract infection was made, and the patient was given supportive treatment pending culture reports.

On examination, the patient was pale, had generalized anasarca and hoarseness of voice, and appeared to have psychomotor retardation. The family members gave history of multiple outpatient visits for anemia, episodes of syncope, and depression. She was on regular supplements and counseling. On further questioning, it was discovered that the patient had been harboring these symptoms for almost a decade following the birth of her second child. She denied a history of postpartum hemorrhage but had lactational failure and developed secondary amenorrhea, cold intolerance, and salt craving over the ensuing weeks and months.

A hormone profile of the patient was done for the suspected diagnosis of Sheehan's syndrome and is summarized in Table 1. The profile was suggestive of pan-hypopituitarism.

Contrast-enhanced magnetic resonance imaging brain with a pituitary window was done which showed

Address for correspondence: Dr. Priya Bansal, Department of Medicine, Academic Block, Lady Hardinge Medical College, New Delhi, India.
E-mail: priyasingal@gmail.com

Access this article online

Quick Response Code:

Website: https://journals.lww.com/jomh

DOI: 10.4103/jmh.jmh_66_24

How to cite this article: Pandey A, Sindagi SM, Singh H, Singhal P, Bansal P, Negi M. A diagnosis of Sheehan's syndrome: Better late than never. J Mid-life Health 2024;15:128-30.

empty sella without any obvious perceptible pituitary tissue [Figure 1]. A bone densitometry scan was also done. It was suggestive of osteopenia.

A diagnosis of Sheehan's syndrome was confirmed, and the patient was started on hormone replacement with:

1. Thyroxine at 75 µg/day
2. Prednisolone 5 mg/day
3. Estrogen replacement therapy.

The patient symptomatically improved, her facial puffiness reduced, and a significant improvement in her disposition was noted over a course of 2 weeks [Figure 2].

Discussion

Hyperplasia of the pituitary gland is a normal pathophysiological process of pregnancy. It is attributed to the growth of prolactin-secreting lactotrophs.[3] The gland increases in both volume and size throughout the course of pregnancy. Increasing size correlates to increased nutritional and metabolic needs, but the vascular supply remains the same.[4] When postpartum hemorrhage occurs, the resultant hypotension and hypovolemic shock cause a decline of blood flow to the gland. The resulting ischemia causes necrosis of adenohypophysis and a dysfunction of the anterior pituitary lobe.

The patient may present as postpartum lactational failure, amenorrhea, and lack of energy. The initial symptoms may be mild and are often overlooked by the affected individual. In a few cases, the patient may present with life-threatening acute adrenal insufficiency and hypothyroidism.[5] Our patient presented with nonspecific symptoms spanning over a decade.

Diagnosis of Sheehan's syndrome requires a high level of suspicion. Differential diagnoses commonly associated with the condition are hypothyroidism, postpartum depression, major depressive disorder, and pituitary tumor. The main diagnostic imaging modality for the diagnosis of Sheehan's syndrome is magnetic resonance imaging.[6] Approximately 70% of all Sheehan's cases have evidence of completely empty sella turcica,[2] as was seen in our patient.

Effective treatment of Sheehan's syndrome includes treating every hormone irregularity that is present. Treatment of adrenocorticotropic hormone (ACTH) and thyroid imbalance is an important aspect of treating Sheehan's syndrome. ACTH imbalance is treated with either hydrocortisone or prednisolone. Corticosteroids should always be given before replacing thyroid hormone replacement, as it can lead to an adrenal crisis.[7] Our patient showed remarkable improvement in symptoms and well-being within 2 weeks of hormonal replacement.

Table 1: Hormone profile of the patient

Hormone test	Value (normal range)
TSH	1.94 µIU/mL (0.34–5.6)
fT4	<0.25 ng/dL (0.6–1.12)
fT3	2.52 pg/mL (2.5–3.9)
FSH	2.16 IU/L (3.5–12.5)
LH	0.56 IU/L (2.4–12.6)
Prolactin	2.06 ng/mL (6–29.9)
Estradiol (follicular)	9.35 pg/mL (12.5–166)
Progesterone	<0.2 ng/mL (0.2–1.5)
Testosterone (female)	<8.0 ng/dL (8.4–48)
Serum cortisol 8 am	2.60 µg/dL
Serum cortisol following cosyntropin stimulation	13.70 µg/dL

TSH: Thyroid-stimulating hormone, fT3: Free triiodothyronine, fT4: Free thyroxine, FSH: Follicle-stimulating hormone, LH: Luteinizing hormone

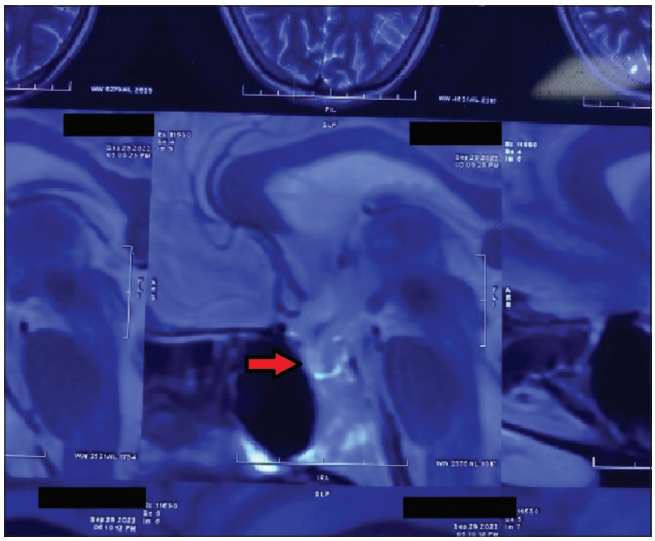

Figure 1: Contrast-enhanced magnetic resonance imaging brain with pituitary window was done which showed empty sella (red arrow) without any obvious perceptible pituitary tissue

Figure 2: The difference in facial features before and after hormone replacement

Conclusion

The current case report highlights the long-term health challenges associated with undiagnosed Sheehan's syndrome. It underscores the importance of maintaining a high level of suspicion during regular clinical visits for early detection of the syndrome, preventing complications that may arise due to delayed diagnosis. It is crucial to raise awareness among health-care professionals, ensuring that cases like these are not inadvertently neglected. This is particularly significant in developing nations, where home deliveries are prevalent, and access to obstetric care may be limited.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Sheehan HL. Postpartum necrosis of the anterior pituitary. J Pathol Bacteriol 1937;45:189-214.
2. Shivaprasad C. Sheehan's syndrome: Newer advances. Indian J Endocrinol Metab 2011;15 Suppl 3:S203-7.
3. Soni M. Sheehan syndrome: A rare complication of post-partum hemorrhage. Nepal J Obstet Gynaecol 2014;9:61-3.
4. Schury MP, Adigun R. Sheehan syndrome. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2023.
5. Matsuzaki S, Endo M, Ueda Y, Mimura K, Kakigano A, Egawa Takata T, *et al*. A case of acute Sheehan's syndrome and literature review: A rare but life-threatening complication of postpartum hemorrhage. BMC Pregnancy Childbirth 2017;17:188.
6. Agrawal P, Garg R, Agrawal M, Singh MK, Verma U, Chauhan R. Sheehan's syndrome in India: Clinical characteristics and laboratory evaluation. J Obstet Gynaecol India 2023;73:51-5.
7. Diri H, Karaca Z, Tanriverdi F, Unluhizarci K, Kelestimur F. Sheehan's syndrome: New insights into an old disease. Endocrine 2016;51:22-31.