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*Case Report*

# A case of a 44-year-old lady presenting with Sheehan's syndrome

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## ABSTRACT

Because of ischemic necrosis following postpartum hemorrhage, patients with Sheehan's Syndrome may exhibit different degrees of anterior pituitary insufficiency. They can report a variety of obscuring clinical signs and symptoms even many years after the postpartum hemorrhage, which could lead to a delay in diagnosis and an increase in mortality and morbidity. We report a case of a 44-year-old G3P3L3 lady who presented with this syndrome with history of postpartum hemorrhage 5 years back during the birth of her last child.

**Keywords:** Hypopituitarism, Postpartum hemorrhage, Sheehan's syndrome

## INTRODUCTION

Sheehan's syndrome, a rare consequence of severe postpartum hemorrhage resulting in ischemic necrosis of the anterior pituitary gland, was first identified by Sheehan in 1937.[1] The previous studies have discovered a range of 1–33 years as the typical time between postpartum hemorrhage and the onset of symptoms.[2] As it is still a significant health concern in most of the developing nations, any woman with a remote history of postpartum hemorrhage who exhibits signs and symptoms of pituitary deficit should be screened for this syndrome for prompt diagnosis and treatment.

## CASE REPORT

A 44-year-old G3P3L3 lady with hypertension and Type II diabetes mellitus presented in shock to the Emergency Room of HAMS Hospital, Kathmandu. On the initial assessment, she was found to be tachycardic (pulse – 130 bpm) and hypotensive (blood pressure – 80/50 mmHg). However, other systemic examinations were unremarkable. Complete blood counts, electrolytes, liver, and renal function tests were within normal limits [Table 1]. She was resuscitated with intravenous fluids and low-dose injection. Noradrenaline infusion as per the protocols. Other relevant investigations were ordered. She was admitted to the intensive care unit (ICU) after the initial stabilization.

Further inquiries during her treatment in the ICU revealed that she had previously experienced a severe postpartum hemorrhage following the delivery of her last child 5 years prior, for which she was hospitalized for a week and required three pints of blood transfusion. In addition, she also provided a history of generalized weakness and multiple psychiatric consultations for depressive illness over the past year.

Hence, in the light of her presenting illness and a significant history of postpartum hemorrhage, a provisional diagnosis of Sheehan's syndrome was made. Hormonal profile revealed decreased levels of anterior-pituitary hormones (pan-hypopituitarism) [Table 1], and a magnetic resonance imaging (MRI) brain revealed empty sella turcica [Figure 1], which confirmed the diagnosis.

Standard dosage of oral contraceptives, thyroxine, and prednisolone was started following consultation with the endocrinology and obstetrics-gynecology departments. After the initiation of the therapy, her condition gradually improved and she was discharged on these medications after a week.

## DISCUSSION

Sheehan initially reported Sheehan's syndrome, an uncommon but possibly dreadful complication of postpartum hemorrhage, in 1937.[3] It develops as a result of postpartum hemorrhage-induced ischemic necrosis of the pituitary gland that follows a severe and prolonged shock.[3] However, other pathophysiological mechanisms such as vasospasm, disseminated intravascular coagulation, small-sized sella turcica, and autoimmunity have also been postulated, but not conclusively proven.[3] When chronic amenorrhea, hypoglycemia crises, and lactational failure are present, an appropriate diagnosis can be made.[4] Delayed diagnosis often occurs as a result of vague symptoms and

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**Table 1:** Laboratory investigations.

| Lab investigations | Values | Reference range |
|---|---|---|
| Total count (/mm$^3$) | 8400 | 4000–11000 |
| Hemoglobin (g/dL) | 12.5 | 12–15 |
| Platelets count (/mm$^3$) | 165000 | 150000–400000 |
| $Na^+$ (mmol/L) | 138 | 135–145 |
| $K^+$ (mmol/L) | 3.8 | 3.5–5.5 |
| TSH (μU/mL) | 0.06 | 0.5–5 |
| fT3 (pmol/L) | 2.1 | 2.0–7.0 |
| fT4 (pmol/L) | 4.2 | 12–30 |
| Prolactin (ng/mL) | 0.15 | <25 |
| FSH (mUI/mL) | 0.30 | 1.5–12.4 |
| LH (mUI/mL) | 0.20 | 1.68–15 |
| Cortisol (mg/mL) | 25 | 100–250 (Morning) |

$Na^+$: Sodium ion, $K^+$: Potassium ion, TSH: Thyroid stimulating hormone, fT3: Free Triiodothyronine, fT4: Free thyroxine, FSH: Follicular stimulating hormone, LH: Luteinizing hormone

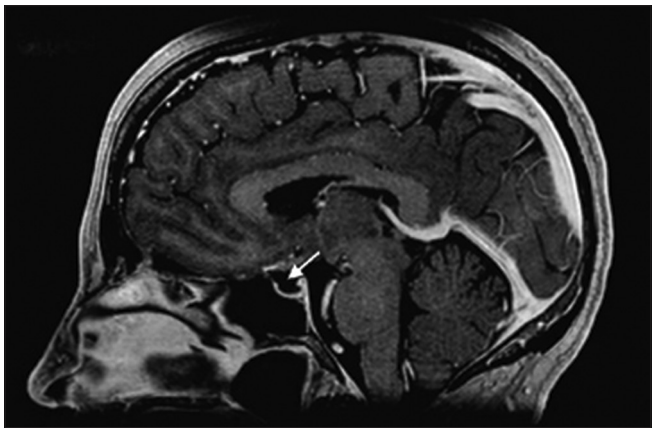

**Figure 1:** Magnetic resonance imaging brain showing empty sella turcica.

inadequate obstetric history.[5] In our case, in addition to the positive obstetric history for postpartum hemorrhage, the patient presented clinical signs of thyroid and cortisol deficits and reported repeated hospital visits in view of generalized weakness and depressive illness.

Since the clinical symptoms are caused by a single or combination of multiple pituitary hormone deficiencies, the diagnosis is made based on the presence of hormone deficiency symptoms, an established obstetric history, and lowered basal hormone levels such as free triiodothyronine, free thyroxine, thyroid stimulating hormone, follicular stimulating hormone, luteinizing hormone, estrogen, prolactin, cortisol, and insulin like growth factor.[6] The investigation of choice is an MRI of the brain, which reveals an early reduction in pituitary size with hyperintensity in T1 and T2 and hypointensity without contrast, followed by a later discovery of an empty sella turcica following pituitary atrophy.[7] The patients with syndrome require a lifetime of hormone replacement therapy to treat their condition.[6]

## CONCLUSION

Although still uncommon, Sheehan's syndrome is one of the most common causes of hypopituitarism in developed nations like ours since the effective management of postpartum hemorrhage is still lacking. It is crucial for treating physicians to have keen observations based on suggestive obstetric history, recognition of even subtle signs and symptoms, and relevant investigations to promptly avoid related morbidity and death with this syndrome. Furthermore, timely identification and lifelong replacement of the deficient hormones will lead to the restoration of normal functions and clinical recovery.

### Ethical approval

The research/study complied with the Helsinki Declaration of 1964.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

### Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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