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Original Research Paper

Medical Science

# A RARE CASE OF SHEEHAN'S SYNDROME .

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KEYWORDS :

## INTRODUCTION

Sheehan's syndrome is postpartum hypopituitarism caused by necrosis of the pituitary gland.(1) It is rare complication which occurs in 1 out of every 100,000 births globally and is the most common cause of hypopituitarism in low- or middle-income countries [2, 3]. It is reported that Sheehan's syndrome accounts for 0.5% of all known cases of hypopituitarism in females [4]. The disease is deemed "rare" in industrialized nations, but in developing nations, due to a lack of access to sophisticated medical procedures, skilled professionals, and medical resources, which contributes to a higher prevalence of postpartum hemorrhage and subsequent Sheehan's syndrome, it is said to occur in 5 out of every 100,000 births [5, 6]. The prevalence is much higher in developing countries, with a prevalence as high as 3.1% in a state in India where more than half of the affected individuals had home deliveries [7]. 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 as a result of elevated estrogen secretion) and secondary to the compression of the blood vessels supplying the gland by the enlarged gland itself or due to grossly decreased blood.

### Case Report

A 45 year old female(P6L4A2)complaints of mild grade fever,generalised weakness,not taking meals since7-8days and altered mentation since 2 days. For which patient was taken to private hospital was admitted there for a day and brought to GMCH with ionotropic support with diagnosis of shock with dyselectrolemia under evaluation. She had histroy of walking to uphill temple with multiple steps 8 days ago.

There was no history of chest pain,palpitations,pedal edema ,orthopnea,headache or convulsions

Patient was started on antibiotics,ionotrops support and treated as case of septic shock with septicemia with multiorgan dysfunction syndrome.

Over the period of time her labs returns to normal limit except newly detected hypothyroidism but her requirement for ionotropic support continued which mandates us to review the history. Patient was married since 1998 and has pregnancies as mentioned 1999 : FTNVD Female,2000: FTNVD male,2001: FTNVD female,2003: FTNVD Female,2004: IUD with severe PPH(history of blood transfusion and longer hospital stay),2005:20 week aborted. Her symptoms dated back to her last pregnancy, as she was amenorric since then. She complained of progressive generalised fatigue and gradual decrease in her work capacity. She had weight loss, anorexia, giddiness, myalgia, arthralgia, dry skin and progressive loss of axillary and pubic hair. All these years she had visited nearby health practitioners and gets symptomatic relief but was never thoroughly evaluated.These symptoms had worsened over past month and with recent history of exertion(uphill walking) landed up in hospital.

With this history patients provisional diagnosis of Sheehan's syndrome was made and she was supplimented with tablet prednisone and tablet thyroxine. Patient weaned off from ionotropic support,diet started improving and MRI brain report confirmed the diagnosis with report stating empty sella. In absence of any head trauma,surgery or irradiation the diagnosis of delayed onset Sheehan's syndrome was confirmed. Patient was discharged home with minimal dose of prednisone and thyroxine and advised to follow up.

## DISCUSSION

Sheehan's syndrome's diagnosis is formed by the patient's history and physical examination, and confirmed by laboratory tests. Hemorrhagic shock during pregnancy is a key leading point in diagnosis. Failure to lactate is often a common initial complaint in patients with Sheehan syndrome [15]. Many of them also report amenorrhea after delivery [16]. The diagnosis of Sheehan's syndrome is not made until several years later in certain cases, when the features of hypopituitarism become apparent in a woman who had postpartum bleeding [17]. A woman with Sheehan's syndrome with undiagnosed hypopituitarism might be apparently asymptomatic until her body is exposed to stressful situations like surgery or infection many years after her delivery, and then she presents with adrenal crisis [18]. Sheehan's syndrome presents with varied symptoms depending on the specific anterior pituitary hormone deficiencies. Prolactin deficiency can cause lactation failure. Gonadotropin deficiency will often cause amenorrhea or genital hair loss. Corticotrophin deficiency can result in generalized fatigue, weakness, hypoglycemia, or dizziness. Growth hormone deficiency causes fatigue, decreased quality of life, and weight loss. Symptoms of central hypothyroidism are clinically similar to primary hypothyroidism, but patients with central hypothyroidism have low triiodothyronine and thyroxine levels, with normal or even inappropriately low thyroid-stimulating hormone levels. Diagnosis of panhypopituitarism is straightforward, but partial deficiencies are often difficult to determine [19]. Sheehan's syndrome can be acute or chronic [20]. Acute cases present with failure to lactate or amenorrhea. Our patient could not breastfeed following her pregnancy due to lactation failure, and became amenorrheic, indicating an acute presentation. In the previously mentioned study in France, the mean diagnostic delay was 2.52 ± 3 months for patients with agalactia and 8.3 ± 8 years for patients with amenorrhea [9]. Moreover, our patient also developed signs and symptoms of chronic Sheehan's syndrome, which include secondary adrenal insufficiency such as asthenia, anorexia, and weight loss progressing to dizziness, nausea, vomiting, and abdominal pain, for which she had repeatedly visited health care providers, but the diagnosis was missed. The French study found that the delay in diagnosis in patients presenting

with hypothyroidism was 8.1 ± 8.5 years and in those presenting with acute adrenal insufficiency was 10.6 ± 9.4 years [9]. In patients who present with acute disease progressing to chronic conditions, the diagnosis could have been made at several stages. In our patient, the first clue to her diagnosis was her lactational failure and amenorrhea, and the next clue was the manifestation of symptoms of adrenal insufficiency in subtle ways with fatigue and anorexia which progressed to dizziness, nausea, vomiting, and abdominal pain, all of which were missed as findings in making a diagnosis. This can be attributed to a lack of awareness, especially given that patients with panhypopituitarism present with varied nonspecific symptoms, coupled with a lack of a thorough history and physical examination required to diagnose a rare disease. Laboratory tests can reveal many other anomalies, including hyponatremia. This is the most common electrolyte imbalance, occurring in 33–69% of cases [21, 22]. T here are several possible mechanisms by which hypopituitarism can result in hyponatremia. Hypothyroidism can cause decreased free-water clearance and subsequent hyponatremia. Glucocorticoid deficiency can also cause decreased free-water clearance, independent of vasopressin. Hypopituitarism itself can stimulate vasopressin secretion and can cause severe inappropriate secretion of antidiuretic hormone, which can also cause hyponatremia. The potassium level in these situations is normal, because adrenal production of aldosterone is not dependent on the pituitary. In this case the initial hypokalemia noted could be due to gastrointestinal loss following diarrhea and vomiting. The patient's sodium level subsequently normalized with commencement of hormone replacement therapy, and potassium was corrected with intravenous potassium chloride (KCL) administration. Anemia is well recognized as a feature of hypopituitarism. Many hormonal deficiencies, including hypothyroidism, adrenal insufficiency, and gonadal hormonal deficiency, can explain normochromic anemia in hypopituitarism [23]. Pancytopenia is rarely observed in patients affected with Sheehan's syndrome, and a literature review reveals the rarity this disorder. Our patient had bicytopenia with mild normochromic normocytic anemia. The possibility of Sheehan's syndrome was suspected because of her obstetric history, signs and symptoms of chronic adrenal insufficiency, hyponatremia, and baseline hormone levels. MRI study of the pituitary gland may reveal different features depending on the stage of the disease. While early scans are not usually helpful for diagnosis, they demonstrate a nonhemorrhagic enlargement of the pituitary gland, leading to its subsequent involution, and late scans typically show an empty sella. A secondary empty sella is considered a characteristic finding in the classical form of Sheehan's syndrome [24]. Treatment of young women with hypopituitarism usually includes replacement of hydrocortisone first and then replacement of thyroid-stimulating hormone and estrogen with or without progesterone, depending on whether the woman has a uterus. Hydrocortisone is replaced first because thyroxin therapy can exacerbate glucocorticoid deficiency and theoretically induce an adrenal crisis [16, 25]. The standard dose of hydrocortisone is 20 mg/ day for an adult (15 mg every morning and 5 mg every evening). Both thyroxin replacement and gonadotropin replacement are common, and doses are titrated to each individual. Replacement of growth hormone is necessary in children with hypopituitarism but is controversial in adults. Some people with severe growth hormone deficiency derive great benefit from replacement, but standard recommendations are not available [26]. For our patient, we replaced relevant and available hormones considering her age, fertility desire, and affordability.

## CONCLUSION

Thus, although it is rare, a high index of suspicion for Sheehan's syndrome by primary care physicians is warranted in patients with an obstetric history of intrapartum or postpartum hemorrhage. Sheehan's syndrome is associated with increased morbidity and mortality if not diagnosed early. A detailed medical history and physical examination supported by laboratory tests is still the cornerstone of diagnosis, reminding clinicians to keep in mind rarely reported diseases like Sheehan's syndrome. Increased awareness and timely diagnosis can help patients avoid a poor quality of life that can span several years and can prevent precipitating complications.

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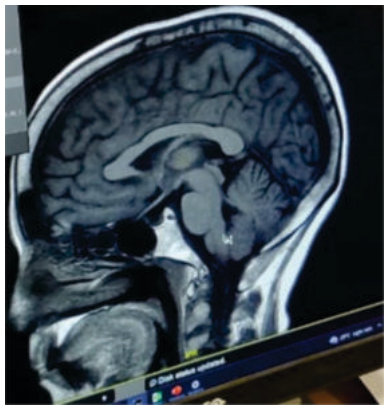
## Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

## Image



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