IJAM

ORIGINAL RESEARCH PAPER ISSN (O) : 2663 - 046X | ISSN (P) : 2663 - 0451

# A CASE REPORT OF PANCYTOPENIA ASSOCIATED WITH SHEEHAN'S SYNDROME THAT RESOLVED WITH HORMONE REPLACEMENT

**Dr. Ajay Bhatta** Postgraduate Resident, Department of Medicine, ABVIMS and Dr. RML Hospital, New Delhi,

**Dr. Rati Singh*** Medical Specialist, Department of Medicine, ABVIMS and Dr. RML Hospital, New Delhi*Corresponding Author

**Dr. Raghuraj Chawla** Postgraduate Resident, Department of Medicine, ABVIMS and Dr. RML Hospital, New Delhi,

**Dr. Megha Pradeep** Postgraduate Resident, Department of Medicine, ABVIMS and Dr. RML Hospital, New Delhi

**ABSTRACT** Sheehan's syndrome is a syndrome of anterior pituitary hormones deficiency due to pituitary ischemia after massive postpartum hemorrhage. Our case is an adult female who presented after 12 years of severe PPH with symptomatic hypoglycemic attacks and pancytopenia on hemogram. Pancytopenia is an uncommon hematological manifestation of Sheehan's syndrome. Hormone replacement corrected pancytopenia within a week

**KEY WORDS :** Sheehan's Syndrome, Pancytopenia, Hypopituitarism

**Case Details:**

A 40 years old married female was brought to emergency department with complaints of multiple episodes of generalized tonic clonic seizures (GTCS) followed by altered sensorium since 5 days. There was no history of fever/ headache/ ear discharge/ head injury. General physical examination revealed palor, pulse rate of 90/min, Blood pressure of 80/ 60 mm Hg. Systemic examination was within normal limits. Her random blood sugar at the time of presentation was 36 mg/dL which was immediately corrected with dextrose infusion. Non contrast computed tomography of brain revealed no abnormality and other basic investigations were sent. Past history revealed post partum hemorrhage 12 years back following which there was failure to lactate her baby and she was amenorrhic since then. Secondary sexual characters were poorly defined including breast hypotrophy, lack of pubic and axillary hair.

Blood investigations revealed hemoglobin of 7.2 g/dL, total leucocyte count of 1700 and platelet count of 50000/ cu mm suggesting pancytopenia. Liver and kidney function tests were within normal limits. Serum B12/ folate levels and iron profile were normal. Antinuclear antibodies, direct and indirect coomb's test were also negative. Her hormone profile revealed low GH, LH, FSH, Prolactin, cortisol, free T3 and T4. TSH was low normal. Contrast enhanced MRI brain findings suggested hypotrophy of anterior pituitary consistent with Sheehan's syndrome.

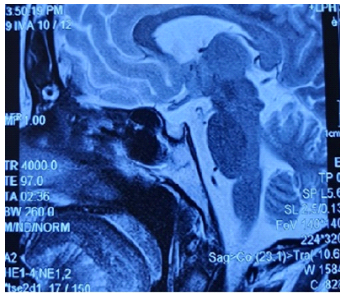

**Figure 1: CEMRI brain showing hypotrophy of anterior pituitary with partially empty sella.**

Patient was started on levothyroxine, hydrocortisone and calcium supplementation. Patient responded and her Hemogram was normal on day 7 with a normal blood pressure when she was discharged. She was followed up after one month and is currently doing well.

**Table 1: Hormone profile of the patient**

| Hormones | Patient's value | Unit | Reference Range |
|---|---|---|---|
| TSH | 0.6 | mU/L | 0.5-5.0 |
| Free T3 | 1.4 | pmol/L | 3.1-6.0 |
| Free T4 | 0.3 | pmol/L | 11.0-21.0 |
| GH | <0.02 | ng/mL | <8.0 |
| LH | 0.77 | mIU/mL | 0.8-15.5 |
| FSH | 1.1 | mIU/mL | 1.5-9.1 |
| Cortisol, 8 AM | 21.9 | nmol/L | 123-626 |
| Prolactin | 1.03 | ng/mL | 3.0-18.60 |

**Discussion:**

Our patient presented with symptomatic hypoglycemia presenting as GTCS and her hemogram revealed pancytopenia. Thorough history and physical examination gave a clue towards hypopituitarism which was later confirmed by hormone profile and MRI brain. However, the cause of pancytopenia was not explained and search for the same was continued. After ruling out possible causes of pancytopenia and looking back at literature, it was observed that pancytopenia was associated with Sheehan's syndrome. Normalization of hemogram following hormone supplementation further strengthened the association.

Sheehan's syndrome is a syndrome of hypopituitarism due to severe postpartum hemorrhage (PPH) which presents with features like lactation failure, amenorrhea, involution of breasts, loss of axillary and pubic hair and features of other pituitary hormone deficiencies.1, 2, 3 Hematological abnormalities have not been paid much attention to in patients with Sheehan's syndrome. Anemia is recognized as a common hematological feature of hypopituitarism. Hypothyroidism, adrenal insufficiency and gonadal hormonal deficiency can explain normochromic anemia in hypopituitarism. 4 However, pancytopenia is uncommonly observed in Sheehan's syndrome. Loss of effect of pituitary hormones on metabolic reactions to hematopoiesis, which is related to hypopituitarism has been postulated as a possible cause of pancytopenia.4, 5 In a study by Gokalp et al.6, they reported hematological abnormality in 65 patients where anemia, bicytopenia and pancytopenia were seen in 52, 14 and 1 patients respectively.

**Conclusion:**

Pancytopenia is an uncommon hematological abnormality in Sheehan's syndrome. When present, it shows complete recovery

***Corresponding Author Dr. Rati Singh**

Medical Specialist, Department of Medicine, ABVIMS and Dr. RML Hospital, New Delhi

after hormone replacement. Therefore, in women with pancytopenia with a history of severe PPH, Sheehan's syndrome may be suspected as a treatable cause.

## References:


1. Zargar AH, Singh B, Laway BA, Masoodi SR, Wani AI, BashirMI (2005) Epidemiological aspects of postpartum pituitaryhypofunction (Sheehan's syndrome). Fertil Steril 84:523–5283.
2. Kelestimur F (2003) Sheehan's syndrome. Pituitary 6:181–188.
3. Zargar AH, Masoodi SR, Laway BA, Shah NA, Salahuddin M,Siddiqi MA (1996) Clinical spectrum of Sheehan's syndrome.Ann Saudi Med 16:338–341.
4. Kim DY, Kim JH, Park YJ, Jung KH, Chung HS, Shin S, Yun SS, Park S, Kim BK:Case of complete recovery of pancytopenia after treatment ofhypopituitarism.Ann Hematol2004,83(5):309-312.
5. Laway BA, Bhat JR, Mir SA, Khan RS, Lone MI, Zargar AH:Sheehan'ssyndrome with pancytopenia–complete recovery after hormonereplacement (case series with review).Ann Hematol2010,89(3):305-308.
6. Gokalp D, Tuzcu A, Bahceci M, Arikan S, Bahceci S, Pasa S(2009) Sheehan's syndrome as a rare cause of anemia secondaryto hypopituitarism. Ann Hematol 88:405–410