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Indian Journal of Obstetrics and Gynaecology
Volume 1 Issue 2

Sheehan Syndrome: A Rare Presentation in Women of Reproductive Age

Lakshmi A[1], Sreelatha S[2]*, Akshatha D. S., Pooja P
[1]Junior resident, [2]Professor, Department of Obstetrics and Gynaecology, ESIMC PGIMSR, Rajajinagar, Bangalore, India
Corresponding Author
Email Id: dr.sreelatha2011@gmail.com

ABSTRACT

Sheehan's syndrome is post partum hypopituitarism due to infarction and necrosis of the pituitary gland. It has a varied presentation ranging from lactational failure and amenorrhea to hypoglycemia, pancytopenia and coma. We are reporting a case of a 40 year old female, who presented to the casualty with hypoglycemia and amenorrhea. MRI features and hormonal profile were suggestive of Sheehan Syndrome. She was started on hormone replacement and responded well to treatment.

Keywords*: Sheehan syndrome, post partum hemorrhage, hypopituitarism, amenorrhea, hypoglycemia, SIADH*

BACKGROUND

Sheehan's syndrome is post partum hypopituitarism due to infarction & amp; necrosis of the pituitary gland due to massive post partum hemorrhage or severe hypotension intrapartum or immediate postpartum. It was first recognised by Dr Harold Leemig Sheehan in 1937, and many cases have been reported since then [1]. Improved obstetric facilities and availability of blood products have led to a decrease in incidence of this condition in today's world. Due to the wide spectrum of functions of the pituitary hormones, it can result in varied presentations ranging from lactational failure and amenorrhea to hypoglycaemia, pancytopenia and coma. Some patients are diagnosed soon after childbirth while in the rest diagnosis can be delayed even upto 20 years [2].

CASE REPORT

A 40 year old P3L1 female was brought to the casualty department with history of loss of consciousness & amp; altered sensorium since 2 hours. On examination, patient was unconscious, pulse rate was 70 bpm, BP was 100/60 mmHg, Respiratory rate was 16 cycles per minute. Cardiovascular & amp; respiratory system examination was unremarkable. Bilateral pupils were reactive to light equally and bilateral plantar flexor response was seen. Her GRBS was found to be 30 mg/dL. The patient was initially given 25% dextrose to correct hypoglycemia, after which she regained consciousness. She was clinically evaluated in detail for the causes of hypoglycemia like drug intake, infection and sepsis. A call was received to OBG department in view of amenorrhea. On eliciting detailed history, it was noted that her last childbirth was 12 years back, she had a home delivery, with history of prolonged and difficult labor, with associated post partum hemorrhage, needing blood transfusion subsequently. She had lactational failure in the immediate post partum period, and was amenorrheic since then. Bilateral breast was atrophic. Pubic & amp; axillary hair was not well grown. Vaginal examination showed dryness & atrophy of the mucosa.

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Table 1: Abnormal Results of Evaluation

Laboratory Test	Result	Reference Range	Interpretation
Hb	6.3	11.5-16.5 gm/dl	Low
RBC Count	1.58	3.5-4.5 mill/cumm	Low
Platelet Count	1.26	1.5-4.5 lakh/cumm	Low
Total WBC	3730	4000-11000/ cumm	Low
FSH	2.17	16.74-113.59 mU/ml	Low
LH	0.2	10.87-58.64 mU/ml	Low
Prolactin	1.24	2.74-19.6 ng/ml	Low
TSH	3.32	0.34-5.6 μ IU/ml	Normal
FT3	1.45	2.45-4.25 pg/ml	Low
FT4	0.24	0.58-1.64 ng/dl	Low

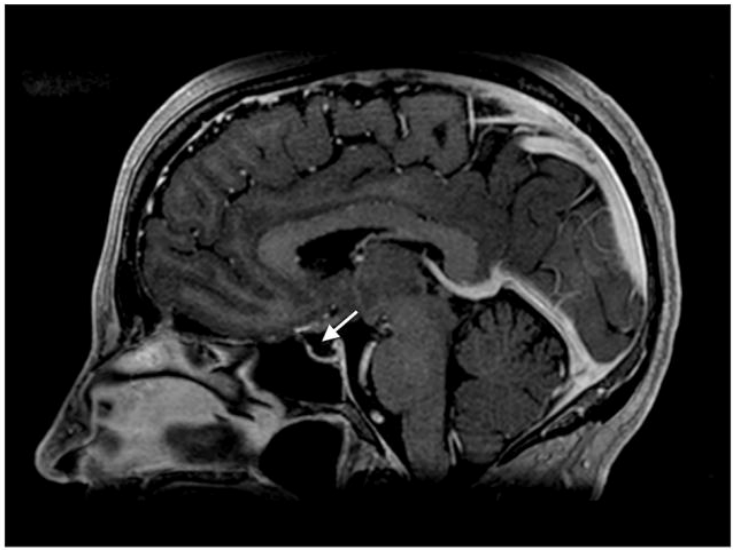

Fig. 1. MRI Brain showing Empty Sella

Table 2: Diagnostic Criteria for Sheehan Syndrome [3]

Kelestimur Criteria
Typical obstetric history of PPH
Severe hypotension or shock for which blood transfusion or fluid replacement is necessary
Failure of post partum lactation
Failure to resume regular menses after delivery
Varying degree of anterior pituitary insufficiency ranging from partial to complete hypopituitarism
A partially or completely empty sella turcica on CT or MRI

DISCUSSION

Sheehan syndrome is post partum hypopituitarism secondary to PPH. The weight of the pituitary gland increases by approximately 1/3 rd during pregnancy due to hyperplasia of prolactin secreting cells which compresses upon the superior hypophyseal artery [4]. Hypotension during delivery results in arterial spasm of the vessels, leading to apoplexy & subsequent pituitary necrosis. The anterior pituitary is more prone for ischemia than the posterior pituitary.

Pituitary gland doesn't have the ability to regenerate. 50% functioning cells is sufficient for maintaining normal functions. Hypopituitarism occurs with necrosis of 70 - 90% of the gland.

Earliest manifestation is inability to lactate due to hypoprolactinemia, followed by failure to resume menses due to gonadotropin deficiency and failure of pubic and axillary hair growth. These patients can present with emergencies like hypoglycemia, hyponatremia, adrenal crisis, myxoedema coma. Hyponatremia can occur by different mechanisms – hypothyroidism induced decreased free water clearance independent of vasopressin [5].

Hypopituitarism itself can stimulate vasopressin secretion and SIADH. Potassium levels are however normal, as adrenal production of aldosterone is independent of the pituitary gland. Cortisol insufficiency, hypothyroidism and hypogonadism can lead to anemia [6].

CONCLUSION

Sheehan syndrome is a rare presentation in today's practice. However one should consider this as a differential diagnosis in those presenting with PPH and amenorrhea following delivery. It is important to provide proper obstetric care to women with decisions for timely intervention to prevent these long term complications.

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