Sheehans Syndrome with Pancytopenia- An Unusual Association

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ABSTRACT: Sheehan’s syndrome is defined by anterior pituitary hormone deficiency due to post-partum ischemic necrosis of the pituitary gland after massive blood loss. We describe a case of 45 year old woman who presented with recurrent hypoglycemia for ten years following history of postpartum hemorrhage. Laboratory test revealed features of hypopituitarism and pancytopenia. Pancytopenia has been rarely associated. Treatment by hormone replacement corrected her hypoglycemia and pancytopenia.

KEY WORDS: Sheehans syndrome, hypopituitarism, pancytopenia, postpartum haemorrhage

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I. Introduction

Sheehan’s syndrome is defined by anterior pituitary hormone deficiency due to post-partum ischemic necrosis of the pituitary gland after massive blood loss. Hypoglycemia due to growth hormone, thyroid, adrenal and other counter regulatory hormone deficiency is known. The most frequent hematologic finding is anemia. Pancytopenia is rarely seen in patients with Sheehan syndrome. Only eight cases have been reported upto now.

II. Case History

We present a case of 45 yrs old female patient presented to the emergency department in an unconscious state. She was cold diaphoretic, her RBS was 53 mg/dl. She had history of similar frequent episodes of hypoglycemia since past 10 years. On physical examination she was pale, had a pulse rate of 60/min, BP of 90 mm hg systolic. On investigation she had inappropriately low normal TSH and FT3 FT4 were decreased suggestive of secondary (central) hypothyroidism. A detailed interview revealed history of post partum hemorrhage during her last pregnancy she required to be transfused with five blood units. The patient had amenorrhea since her last pregnancy. Taking into consideration all of these hypopituitarism was thought of; pituitary hormone studies were compatible with pituitary insufficiency (table 1). Her haemogram showed pancytopenia. The diagnosis of Sheehan’s syndrome was further supported by the MRI brain demonstrated an empty sella. Patient was discharged on Levothyroxine and prednisolone, along with bisphosphonates, calcium and vitamin D and on follow up there was complete recovery of pancytopenia. Hormone therapy for reproductive function was considered and decided against taking into account of her age and personal opinion.

III. Discussion

Hypoglycemia as a presenting feature for hypopituitarism is more often seen in the setting of pituitary apoplexy than Sheehan’s. We present a patient who had history of recurrent admissions for hypoglycemia, sometimes life threatening requiring intravenous glucose. Although it was accompanied by secondary amenorrhea but patient did not present for this. The obstetric history in the past and clear signs of hypothyroidism on examination led us to the diagnosis.

Many hormonal deficiencies, such as hypothyroidism adrenal insufficiency and gonadal hormone deficiency can explain normochronic anemia in hypopituitarism. As pituitary hormones modulate the production of erythropoietin it can be the result of a physiologic adjustment to lower oxygen in the kidney. This is supported by the low erythropoietin levels found in these patients. However within the framework of hematologic disorder, pancytopenia is rarely observed and is best explained as a consequence of loss of effect of pituitary hormones on metabolic reactions to hematopoiesis, which is related to hypopituitarism. As shown previously the patients hematological profile improved with corticosteroid and thyroxin replacement. Only few cases have been reported so far.

<table>
<thead>
<tr>
<th>TEST</th>
<th>8/11/14</th>
<th>1/12/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hb</td>
<td>8.1 gm/dl</td>
<td>10.5 gm/dl</td>
</tr>
<tr>
<td>TC</td>
<td>2800 cell/mm3</td>
<td>11,300 cell/mm3</td>
</tr>
<tr>
<td>DC</td>
<td>62/33/5</td>
<td>62/65/21</td>
</tr>
<tr>
<td>Platelet count</td>
<td>54000</td>
<td>2 lakh</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>TEST</th>
<th>VALUE</th>
<th>NORMAL RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSH (mIU/ml)</td>
<td>0.35</td>
<td>0.5 - 5.5</td>
</tr>
<tr>
<td>FT4 (ng/dl)</td>
<td>&lt;0.4</td>
<td>0.89 - 1.76</td>
</tr>
<tr>
<td>FT3 (pg/ml)</td>
<td>1.41</td>
<td>2.3 - 4.2</td>
</tr>
<tr>
<td>S.Cortisol (mcg/dl)</td>
<td>3.47</td>
<td>16.5 - 26.5</td>
</tr>
<tr>
<td>FSH (mIU/ml)</td>
<td>1.17</td>
<td>21.7 - 153</td>
</tr>
<tr>
<td>LH (IU/l)</td>
<td>0.012</td>
<td>1 - 20</td>
</tr>
<tr>
<td>S.ACTH (Pg/ml)</td>
<td>14.48</td>
<td>9 - 52</td>
</tr>
</tbody>
</table>

References

[3]. Huang YY, Ting MK, Hsu BR, Tsai JS: Demonstration of reserved anterior pituitary function among patients with amenorrhea after postpartum hemorrhage.

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