International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2019): 7.583

Pancytopenia: It's in the Brain

Vinus Taneja[1], Kush Mehrotra[2], Pooja Khosla[3]

[1, 2, 3]Department of Medicine, Sir Ganga Ram hospital, New Delhi, India

Abstract: ***Pancytopenia is a very rare presentation of hormonal deficiencies. We describe a 49-year-old woman who presented with pancytopenia which did not improve despite conventional medical therapy. Her history of a previous episode of massive postpartum hemorrhage suggested Sheehan's syndrome, and the pituitary hormonal studies revealed panhypopituitarism. The relationships between pancytopenia and Sheehans syndromes are rare and have been not much reported. An increased awareness of this condition among physicians is warranted as the patient may be erroneously miss diagnosed and the treatable cause of pancytopenia; Sheehans syndrome may be missed.***

Keywords: Sheehan's syndrome, pancytopenia, panhypopituitarism

1. Introduction

Sheehan's syndrome is a postpartum hypopituitarism which occurs due to ischeamic necrosis of the pituitary, due to massive postpartum hemorrhage.[1]Pancytopenia is a uncommon presentation associated with Sheehan's syndrome, which occurs due to loss effect of pituitary hormones on metabolic reactions to hematopoiesis related to hypopituitarism. We report a case of 49-year-old woman who presented with pancytopenia which did not improve despite conventional medical therapy. Her history of a previous episode of massive postpartum hemorrhage suggested Sheehan's syndrome, and the pituitary hormonal studies revealed panhypopituitarism. The pancytopenia was totally recovered after appropriate Hormone replacement treatment.

2. Case Report

A49 year old married female, was incidentally found to have pancytopenia during bilateral split ear lobule reconstructive surgery. She had history of swelling over face and lower limbs on & off, recurrent oral ulcers, change in tone of voice, easy fatigability and generalised weakness. There was no history of fever, joint pains or rashes. She was diagnosed as hypothyroidism in 2003, but, the patient did not take treatment for the same.

Obstetrics history: She had 3 children with first and second pregnancies being uneventful and third pregnancy in 2002 ending as premature vaginal delivery followed by postpartum hemorrhage and lactation failure. She attained menopause at the age of 44 years. On physical examination, she was conscious, co-operative and oriented to time, place and person. Her pulse was 72/min, BP 98/58 mmHg, RR 18/min, facial puffiness was present, bilateral pedal edema was present. Systemic examination was unremarkable. Her initial investigations revealed pancytopenia. Hb:8.4 gm/dl, TLC: 3000/cumm, Platelets: 80000/cumm, Creatinine: 0.76 mg/dl, Na:136 meq/l, K: 3.8 meq/l, Total Protein:7.2 mg/dl,. Albumin:3.06 mg/dl. Bone marrow examination was done which revealed hypocellular marrow, with myeloid to erythroid ratio 2:1. Thyroid profile was suggestive of secondary hypothyroidism. In view of edema, early menopause, hypothyroidism, and her obstetric history, her pituitary hormones were sent and were low. FSH was 9.61 IU/ml, LH was 1.24 IU/L, Prolactin was 2.14 microgm/l, S estradiol was <10, IGF-1 was 27.45 nmol/l. Serum cortisol was 10.70. ACTH stimulation test was positive (3.03microgram/dl). MRI pituitary was done which revealed empty sella with hypoplastic pituitary gland. Final diagnosis was made of panhypopituitarism due to Sheehan's syndrome. She was managed with hormonal supplementation (glucocorticoids, mineralocorticoids and thyroxine) in physiological doses. Pancytopenia completely recovered over a period of one week.

3. Discussion

Hematological consequences rarely occur in Sheehan's syndrome. Amongst hematologic disorders, anaemia is the most common and pancytopenia is rarely observed .[2] It occurs due tothe hormonal deficiencies, such as hypothyroidism, adrenal insufficiency and gonadal hormonal deficiency or physiologic adjustment to lower oxygen requirement, as pituitary hormones modulate the production of erythropoietin in the kidney. Steroid hormones directly stimulate erythropoiesis. In addition, GH and IGF-1 are known to have a direct effect on erythroid and myeloid precursor progenitor cells.[3]We could trace very few case reports of pancytopenia due to panhypopituitarism by using Medlinesearch. Six of these cases were associated with Sheehan's syndrome; one each was associated with macroprolactinoma, hypothalamic glioma, acromegaly and suprasellar germinoma. Most patients recover by simultaneous replacement of cortisol and thyroid hormone. The interesting thing about our case is late detection of panhypopituitarism as cause of pancytopenia. Laway et al [4] study showed cases of Hypocortisolism, hypothyroidism, hypogonadism and GH and PRL deficiency and Sheehan syndrome who were treated with prednisolone. Gokmen Akoz et al[5] study showed cases of Hypocortisolism, hypothyroidism, hypogonadism and GH deficiency with Sheehan syndrome, treated with prednisolone and L-thyroxine showed improvement.

References

[1] Ozdogan M, Yazicioglu G, Karadogan I, Cevikol C, Karayalcin U and Undar L. Sheehan's syndrome associated with pancytopenia due to marrow aplasia;

full recovery with hormone replacement therapy. Int J Clin Pract. 2004; 58:533-535.
[2] Fatma M, Mouna E, Nabila R, Mouna M, Nadia C and Mohamed A. Sheehan's syndrome with pancytopenia: a case report and review of the literature. J Med Case Rep. 2011; 5:490
[3] Jung HK, Yong JL, Ji HK, Bo KC, Yun KJ and Sang SK et al. Pancytopenia Associated with Hypopituitarism in an Acromegaly Patient: A Case Report and a Review of the Literature Endocrinol Metab.2012; 27:308-313.
[4] Laway BA, Bhat JR, Mir SA, Khan RS, Lone MI, Zargar AH: Sheehan's syndrome with pancytopenia: complete recovery after hormone replacement (case series with review). Ann Hematol. 2010; 89:305-308.
[5] Gokmen AA, Atmaca H, Ustundag Y, Ozdamar SO: An unusual case of pancytopenia associated with Sheehan's syndrome. Ann Hematol.2007; 86:307-308.