Sheehan's Syndrome Presenting with Double Depression- A Diagnostic Challenge

Dr. Hiranya Kumar Goswami[1], Dr. Dhrubajyoti Bhuyan[2], Dr. Neha Dua[3]

ABSTRACT

Endocrine disorders are common medical conditions. As hormones affect a variety of organ systems, endocrinopathies may produce a variety of psychiatric symptoms. Early in the course of endocrine disease patients are more likely to present primarily with psychiatric symptoms. Here we are presenting a case with persistent low mood and decreased interest for a period of two and half years with frequent episodes of weakness, laziness, tiredness, giddiness, disturbed sleep, tremulousness while walking, inability to walk without support, decrease food intake and occasional vomiting with increased worry, decreased personal care, social interaction and no interest in any activity lasting for 10 to 20 days.

She was treated successfully every time with antidepressants and Anxiolytic along with intravenous fluid. Considering the recurrent nature of the illness, it was a diagnostic and therapeutic challenge for the treating psychiatrists. Later on the case was diagnosed to have Sheehan's syndrome- hypopituitarism, with double depression and treatment with only hormone replacement therapy showed significant improvement in terms of depressive and other symptoms.

Key words- Double Depression, Hypopituitarism, Sheehan Syndrome

[1] Professor [2] Assistant Professor [3]Post Graduate Trainee
Department of Psychiatry, Assam Medical College, Dibrugarh, Assam, India
Corresponding author mail: dr.dhrubajyoti@gmail.com

Conflict of interest: Nil

INTRODUCTION

Hypopituitarism refers to loss of pituitary gland hormone production. Sheehan's syndrome is rare condition but in a developing country like ours, owing to the lack of effective management of postpartum bleeding and its complications, it is still one of the commonest causes of hypopituitarism. Sheehan's syndrome is defined by varying degrees of anterior pituitary deficiency due to postpartum ischemic necrosis of the pituitary gland after massive bleeding[2]. Many a times it's a psychiatrist who comes in first contact

with such patients and it may become difficult to distinguish the symptoms from psychiatric illnesses.

Patients may experience a worsening of the psychiatric condition and an emergence of physical symptoms with the progression of the disorder. So a greater understanding of such endocrine disorders is needed for better management of such patients.[1]Here we are presenting a case of Delayed presentation of Sheehan's syndrome- hypopituitarism with depressive features who first sought help from psychiatrist for the symptoms and subsequently was diagnosed as having hypopituitarism.

CASE REPORT

Mrs X, 66 years married female, presented to Psychiatry Outpatient Department of Assam Medical College Hospital, Dibrugarh with 3 weeks history of low mood, weakness, laziness, tiredness, giddiness, disturbed sleep, tremulousness while walking, inability to walk without support, decrease food intake and occasional vomiting with increased worry, decreased personal care, social interaction and no interest in any activity or work. She was admitted and on detailed workup she was found to have persistent low mood and decreased interest for a period of two and half years with frequent episodes of similar nature in between for which she had consulted various physicians and psychiatrists.

She was repeatedly diagnosed as Major Depressive Disorder or mixed anxiety depressive illness and was treated with antidepressants and anxiolytics without significant improvement. She also gave history of multiple short admissions in various hospitals due to unresponsiveness and weakness which showed improvement after administration of intravenous fluids. Since 3 weeks again she had exaggerations of the symptoms for which sought help from our hospital.

She had history of tuberculosis treated 35 years ago and 2 years ago she was operated for gall stones. No family history of mental illness. She is married for 40 years and had five children. She had a history of Medical Termination of Pregnancy at 6 weeks of gestation 30 years back. As per attendant due to retained products after dilatation and curettage there was heavy uncontrolled bleeding and surgical intervention had to be undertaken. Two years later she became pregnant and

following delivery she again had heavy bleeding. Since then she had amenorrhoea.

On general examination- pulse-86/min, blood pressure-94/70 mm Hg (supine), 76/60mmHg (in standing position), pale skin with absence of hair from axillae and groin. Examination of the respiratory, Cardiovascular system and abdomen were normal. Central nervous system examination revealed generalized muscle and fat wasting, tremulousness while walking and power 3/5 in lower limbs and 5/5 in upper limbs and delayed relaxation of the ankle reflexes, the remaining examination was normal including fundoscopy.

Mental Status examination revealed decreased psychomotor activity, decreased personal hygiene and grooming, depressed affect, restricted range towards sadness, decreased rate, volume and whispering tone of speech along within feelings of hopeless, worthlessness, helplessness and preoccupation with her symptoms mainly weakness, decreased appetite, tremulousness.

Her diagnosis was deferred with differential diagnosis as organic brain syndrome, chronic fatigue syndrome or chronic depression. All her medications that she was taking previously were stopped. She screened positive for depression on PRIME-MD-PHQ-9 and Becks depression inventory score revealed a score of 20 indicating mild to moderate depression.

INVESTIGATIONS

Investigations revealed Hb-10.6gm%, TLC- 5300cells/cumm, ESR-35 mm at the end of first hour, FBS-76mg/dl, PPBS- 124mg/dl, Total protein-6.3g/dl, A:G ratio-1.2,Total bilirubin-0.63mg/dl, AST-55U/L, ALT-59U/L, ALP-170 U/L, GGTP- 46U/L, S. creatinine -0.9mg/dl. Chest X-ray was suggestive of past infection and ECG and EEG were normal. MRI brain showed—marked thinning of the pituitary gland at the floor of sella with very thin rim of residual anterior pituitary tissue-with maximum CC thickness of about 1.1 mm with secondary empty sella as evidenced by excessive CSF filled sella turcica. Endocrinological tests showed T3-0.3ng/ml (0.7-2.2ng/ml), T4-58ng/ml(55-135ng/ml), TSH- 2.5(0.5-4.5), serum growth hormone(CLIA)-0.06ng/ml(0.00-18ng/ml), Prolactin serum(CLIA)- 21.25ng/ml(normal for postmenopausal-1.80-20.30 ng/ml). Other

tests like Serum cortisol, FSH, LH, estrogen could not be done as patient refused due to affordability issues.

Serum sodium at the time of admission was-120.2mEq/Land S.K+ 3.82mEq/L. She was diagnosed as a case of Sheehan's syndrome presenting with double depression. Medicine and Neurology consultation were taken. Despite being on NaCl IV and salt capsules for next five days, serum sodium was persistently low (120-110 mEq/L). As our patient had recurrent persistent hyponatremia Tab. Tolvaptan 15mg twice daily for 1 day was given. Within 2days serum sodium came within normal range. So, Tab. Tolvaptan was stopped. Patient improved clinically. Tremulousness decreased, she was able to walk without support and was feeling better. Tab. Prednisolone 10mg, I tablet after breakfast, tablet thyroxine 25ug, one tablet in morning empty stomach and Desmopressin nasal spray –one puff at alternate nostril a day was started along with liver support. However no antidepressant was prescribed as the patient showed significant improvement following hormone replacement therapy. On follow up visit after a month she showed a significant improvement in her symptoms with no symptoms of depression. Till now she had made several follow up visits and is found to be free from any such episodes.

DISCUSSION

Hypopituitarism is defined as either partial or complete deficiency of anterior or posterior pituitary hormone secretion, or both. In some cases the syndrome can present in atypical and incomplete forms as the pituitary necrosis may be partial, thus further complicating the diagnostic procedure [3,4]. A number of causes have been established for hypopituitarism. Apart from adenohypophysal necrosis some other causes can be tumoral, immunological, iatrogenic, traumatic, infectious and genetic [4,5].

Sheehan's syndrome refers to postpartum hypopituitarism as a result of pituitary necrosis which occurs during severe hypotension or shock secondary to massive bleeding during or just after delivery. It was first described by HL Sheehan in 1837 but was known as Simmond's disease tlil 1939[2]. Though rare now days it is still encountered at times in

a developing country like ours as postpartum bleeding is common and timely intervention is not possible in many remote and rural areas.

The clinical presentation is variable with abrupt or insidiously developing pituitary insufficiency. The mean duration between postpartum bleeding and the subsequent development of symptoms varies from 1 to 33 years[6]. Our patient could have had late onset sheehan syndrome. Paudyal BP had also reported a case of an elderly lady with this syndrome who had slowly progressive panhypopituitarism 24 years after a severe haemorrhage associated with the delivery of triplets who had presented with lethargy, loss of weight and appetite, and alternating diarrhoea and constipation for a duration of eight months[7].

Symptoms of hypopituitarism depend on which hormone or hormones are missing. Our patient had clinical features though vague but consistent with GH, ACTH and TSH deficiency, suggestive of hypopituitarism. In our case levels of all the hormones could be estimated but there was low free T3 level and normal TSH level. In patients with Sheehan's Syndrome there is low Free T3 and Free T4 with paradoxically normal or mildly elevated serum TSH (Shivaprasad C 2011) [8].

ACTH deficiency causing cortisol deficiency can result in weakness, fatigue, weight loss, abdominal pain, low blood pressure and low serum sodium levels, skin pallor. Chronic adrenal insufficiency produces more subtle symptoms, including fatigability, salt craving, weight loss, vitiligo, nausea, hyperpigmentation, loss of body hair, muscle cramps, apathy, irritability, and depression, ranging from mild to severe. Symptoms develop insidiously over months or years. [1] Some form of depression has been observed in 30%–50% of patients by Kornstein et al. 2000[9]. Adrenal insufficiency is particularly likely to be misdiagnosed as primary major depression[10]. Our patient also gave a similar type of picture and was also misdiagnosed as depression for 2 years.

TSH deficiency causing thyroid hormone deficiency can result in fatigue, weakness, difficulty losing weight, generalized, body puffiness, feeling cold, constipation, difficulty with memory and an inability to concentrate. In addition, anaemia, high cholesterol levels and liver problems may also occur. Almost all

patients with hypothyroidism have some concurrent symptoms of depression and subclinical hypothyroidism is now recognized as a potential risk factor for depression (Haggerty and Prange 1995)[10,11]. Our patient had some of these symptoms along with a mildly deranged liver status.

LH and FSH deficiency in women may cause loss of menstrual cycles, infertility and osteoporosis.GH deficiency in adults may cause a decrease in energy and physical activity, increased cardiovascular risk factors/diseases and decreased quality of life [9].Antidiuretic hormone deficiency results in diabetes insipidus (DI) presenting as increased thirst and frequent urination, particularly at night[10].

The goals of treatment in such patients are to improve the symptoms and to replace the deficient hormones to a level that is as close to physiologically correct. Psychiatric symptoms in such patients will not resolve and may worsen with psychotropic agents, until the underlying endocrine disturbance is corrected[1].

Our patient improved by correcting the underlying endocrine pathology with hormonal treatment without adding any antidepressants for the depressive and anxiety features. It was seen that earlier use of antidepressants without correcting the underlying pathology did not give much relief to the patient. Thus, it is very important to diagnose hormone deficiencies and endocrinopathies should also be considered as a possible cause of treatment-resistant psychiatric disorders.

CONCLUSION

The endocrine disorder may manifest as a psychiatric condition or a psychiatric condition may be a complex biopsychosocial and/or biological response to the endocrine disorder. On the other hand psychiatric conditions and their treatment may also increase risk of endocrine disorders. So understanding the ways in which these disorders interact or intersect is important for the practitioners treating patients with psychiatric and/or endocrine disorders.

REFERENCES

1. Rasgon NL, Hendrick VC, Garrick TR. Endocrine and Metabolic Disorders.In: Sadock BJ, Sadock VA, Ruiz P.(Editors) Kaplan and sadock's textbook of psychiatry vol

2.9th edition.Lippincott Williams & Wilkins;2009.pg2304-2314

2. Sheehan HL. Simmonds disease due to postpartum necrosis of the anterior pituitary following postpartum haemorrhage. Q J Med 1939;32:277-309
3. Merger R, Levy J, Melchior J. Précis d'obstétrique, 4e édition. Paris : Masson, 1974 : 321-31
4. Prabhakar VKB, Shalet SM. Aetiology, diagnosis, and management of hypopituitarism in adult life. Postgrad Med J 2006;82:259–266.
5. Perraudin V, Lefebvre H, Kuhn JM. Insuffisance antéhypophysaire. Encycl Méd chi (Paris), Endocrinologie-Nutrition 10 - 019 – A-10, 1-12, 1992
6. Huang Y. -Y, Ting m-K, HSH BRS, Tsar JS.Demonstration of reserved anterior pituitary function among the patients with amenorrhea after postpartum hemorrhage. Gynecol Endocrinol 2000; 14: 99-104
7. Paudyal BP.Delayed presentation of Sheehan's syndrome: a case report.Kathmandu University Medical Journal 2005 ;3,10:175-177
8. Shivaprasad C, Sheehan's syndrome: Newer advance, Indian J Endocrinol Metab. 2011 Sep; 15(Suppl3): S203–S207
9. Kornstein SG, Sholar EF, Gardner DG: Endocrine disorders, in Psychiatric Care of the Medical Patient, 2nd Edition. Edited by Stoudemire A, Fogel BS, Greenberg D. New York, Oxford University Press;2000.pp 801–819
10. Fabbri AG, Musen G, Sparks CR,Greene JA,Levenson JL, Jacobson AM. Endocrine and Metabolic Disorders. In: Levenson JL.Textbook Of Psychosomatic Medicine,1st edition .London:The American Psychiatric Publishing;2005.pp-495
11. Haggerty JJ Jr, Prange AJ: Borderline hypothyroidism and depression.Annu Rev Med 1995;46:37–46