Case Series

Profile Of Presentation of Panhypopituitarism In The Department of Internal Medicine At A Tertiary Care Center In Eastern India

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Abstract -

OBJECTIVE: Panhypopituitarism is a underdiagnosed entity . The aim of this communication is to highlight its existence and the challenges in diagnosis.

METHODS: A retrospective analysis of data of 5 patients of panhypopituitarism from 2017 to 2019 was done. Clinical, investigative, management and follow-up data are analysed.

CONCLUSIONS: Serum Cortisol, FSH, LH, TSH, FT4 AND MRI brain enable the diagnosis of panhypopituitarism in background of strong clinical suspicion of patients presenting with Hypotension, Low Capillary Blood Glucose, Hyponatraemia Refractory to Medical Therapy.

Keywords-PanhypopituitarismHyponatraemiaLow Capillary Blood Glucose

INTRODUCTION:

Panhypopituitarism is a underdiagnosed entity in the society. As the physicians are often not aware of its existence they remain underdiagnosed for significant amount of time. Often times the thyroid function may remain normal in some of these patients which could be attributed to differntial affection of various trophic hormones. It could be that they have residual function of trophic hormones and get manifested during conditions of acute stress.

There are scattered reports of panhypopituitarism. This series document the profile of presentation of panhypopituitarism encountered in tertiary practice which is missed out in primary and secondary practice. However a strong clinical suspicion in patients presenting with Hypotension, low CBG, hyponatraemia refractory to medical therapy gives clue to the diagnosis of panhypopituitarism.

MATERIALS AND METHODS:

The material for this study is obtained from records of academically interesting patients maintained by the authors in a tertiary care hospital. 5 cases were diagnosed treated and followed up during 2017 to 2019.

The diagnosis of panhypopituitarism were based on clinical presentation, SERUM CORTISOL, LH, FSH, TSH, FT4, MRI BRAIN, management details including administration of low dose steroids and replacement dose of L-Thyroxine are available.

SIGNIFICANT SIMILARITIES:

- They all presented at a late stage of their life above the age of 50
- All of them were quite oblivious of their inciting cause that could have led to panhypopituitarism

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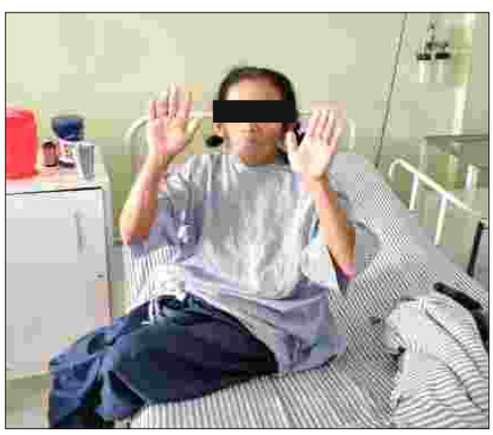

Figure-1: Showing pituitary Pallor

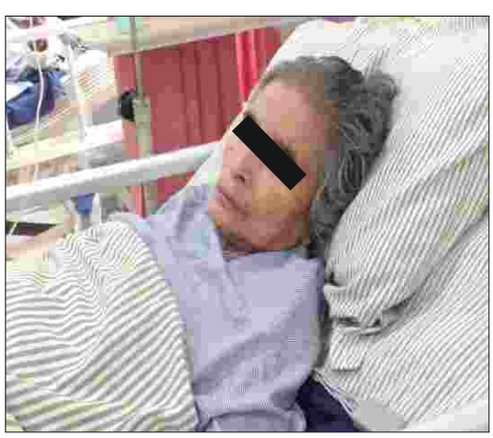

Figure-2 : Showing pituitary Pallor

- All of them had h/o multiple hospital admissions which were treated mainly with iv fluids.
- All of them had pallor which was unaccounted.
- Fatigue, obtundation, hyponatremia are often the most common shared feature.
- The diagnosis was clinched by inapporopiately low TSH in the face of low ft4, low cortisol, and low FSH, LH. Doing ACTH and growth hormone are often very difficult in low resource setting.

NAME	AGE	FEATURES AT ADMISSION	SERUM 8AM CORTISOL	LH	FSH	TSH,FT4
Patient -1 / F	52 Years	Obtundation,severe hypotension & persistently low CBG levels, anaemia	0.79ug/ml [5-25]	0.40 mIU/ml [0.5 - 61.2]	2.36mIU/ml [3 - 12]	7.46mcIU/ml, 1.30pg/ml [0.8-2]
Patient -2 / M	51 Years	Obtundation, Hyponatremia	1.88ug/ml [5-25]	1.07mIU/ml [3-57.3]	1.91mIU/ml [3 - 12]	2.35mcIU/ml,1.32pg/ml [0.8-2]
Patient -3 / F	72 Years	Easy fatigability, Hyponatremia	3.16ug/ml [5-25]	3.47IU/ml[14.2-52.3]	6.79IU/ml[19-100.1]	1.81mcIU/ml, 0.28pg/ml[0.8-2]
Patient -4 / F	54 Years	Diarrhoea, Obtundation, hyponatremia, Hypoglycemia	2.5ug/ml [5-25]	0.4mIU/ml [0.6-61.2]	1.8mIU/ml [3-12]	0.02mcIU/ml, 0.4pg/ml[0.8-2]
Patient -5 / F	58 Years	Diarrhoea, vomiting in the face of Hypoglycemia with h/o recurrent hyponatremia and Hypoglycemia	2.27ug/ml [5-25]	0.5mIU/ml [0.8-10.5]	1.74 mIU/ml [3 - 12]	2.6mcIU/ml, 0.67pg/ml [0.8-2]

- In African and low resource countries where PPH remains an important cause of maternal morbidity these simple method of awareness and diagnosis can be of great help to these economically challenged woman.
- This paper further provides a simplistic model to pickup such patients.
- Moreover getting access to ACTH injection in low resource setting is often very difficult. Therefore stimulation test could not be carried out, most of the times. Many studies have reported high interassay variability and low reproducibilty of plasma ACTH assays.

DISCUSSION:

Panhypopituitarism is a disease characterized by complete or partial deficiency of hormones secreted by the pituitary gland[1,2]. There are a variety of etiologies that range from cranial surgery, Radiotherapy, Tumours, Hereditary, Infiltrative, Infectious and Head Trauma[1].

The clinical presentation may vary from person to person. It may range from asymptomatic to life threatning features of adrenal insufficiency. Signs and symptoms of the disease may persist for several years without diagnosis. High suspicion of the disease , biochemical evaluation are useful tools in early diagnosis[1,2]. In these patients due to cortisol and thyroid hormone deficiency, qt prolongation and heart rhythm disorders may coexist[3,4]. Moreover accessing all the pituitary hormones particularly with stimulation tests is often very challenging and economically demanding leading to appreciation of diagnosis.

Treatment of panhypopituitarism includes hormone replacement therapy. The main goal of hormone replacement therapy is to achieve normal levels of circulating hormone to maintain natural hormonal mileu and relief of symptoms[1].

Considering the extent of clinical signs of panhypopituitarism we must keep a high index of suspicion. Though the authors understand that for complete wellbeing growth hormone remains an important entity. But nonetheless it is an expensive proposition in most of the cases. However as this is not life threatening growth hormone supplementation can be safely avoided in low resource setting.

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