

Case Report

Empty sella syndrome- A rare cause for intractable vomiting and hyponatremia

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Abstract

Empty sella syndrome is a rare presentation and is usually diagnosed by imaging specifically done for assessing pituitary gland. It occurs due to herniation of subarachnoid space into the sellar space through a defect in diaphragm sellae. Some develop features of hypopituitarism gradually over a period of time. We report a case where an elderly presented with recurrent vomiting and hyponatremia, evaluation suggestive of hyponatremia, hypocortisolism, hypothyroidism and diagnosed to have Empty sella syndrome.

Key words- Empty sella syndrome, Hyponatremia

Introduction

Empty sella syndrome is a condition which is characterized by defect in diaphragm sellae that results in herniation of subarachnoid space into the sellar space¹. The Pressure on the bony walls of the sella can lead to later remodeling, sellar enlargement and flattening of the pituitary gland¹. Empty sella can be primary (idiopathic) or secondary. In primary empty sella the treatment is symptomatic, whereas in secondary, we will have to consider the underlying cause. The Pituitary gland weighs approximately 600 mg and is located within the sella turcica ventral to diaphragm sellae². This is one of the structural defect which can cause hypopituitarism. Most of the time the patient doesn't have any pituitary dysfunction implying that the Pituitary is still functional². But some may develop hypopituitarism gradually.

Case report

A 60 year old female presented with long standing history of recurrent vomiting and tiredness. Clinical examination was normal except for the presence of pallor. The initial investigation was suggestive of hyponatremia (serum sodium-112 mmol/L). The provisional diagnosis kept was acute gastritis with vomiting induced dyselectrolytemia. She was managed with proton pump inhibitors and intravenous fluids. As she had long standing history of recurrent vomiting, an ultrasound of the abdomen and upper GI endoscopy was done which was suggestive of mild antral gastritis. She was discharged with a course of proton pump inhibitors and was kept under close follow up. Three weeks later she again presented to the casualty with recurrent vomiting and tiredness. The serum sodium level was

115 mmol/L. A complete hyponatremia workup was initiated and it was found that her serum cortisol level was low 0.649 mcg/dl (8 am) and she had hypothyroidism. An MRI Pituitary was considered to rule out a central cause and it was s/o empty sella syndrome. Later she was managed with Thyroxine and steroid supplementation. There was significant improvement when she came for review after one month.

Discussion

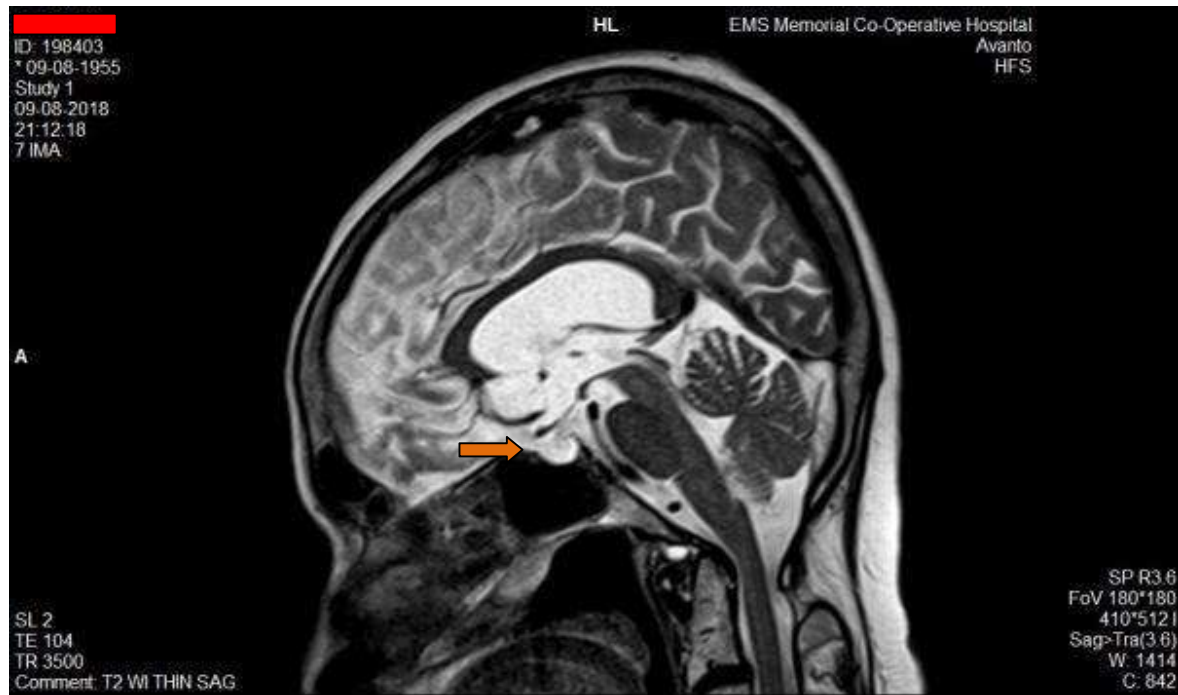
Empty sella syndrome is a rare presentation. It is diagnosed by imaging specifically done for pituitary gland. Most of the time, they are asymptomatic, but some develop features of hypopituitarism. It is not wise to expect the classic findings of hypopituitarism. Some are diagnosed when we evaluate for the cause of intractable vomiting. Such presentations are rare and we report a case where an elderly presented with intractable vomiting and later diagnosed to have empty sella syndrome. A very similar presentation of empty sella syndrome with intractable vomiting was reported previously³.

There are also cases where hyponatremia was the initial presentation. Many cases were diagnosed as part of evaluation for hyponatremia.^{4,6} Our patient also had hyponatremia initially thought to be a vomiting associated dyselektrolytemia. Empty sella syndrome should be considered in those with recurrent hyponatremia after excluding other entities.

Though asymptomatic, it can present with features of hypopituitarism. Various journals state the need for considering it as a cause for hypopituitarism rather than an incidental finding.⁷⁻⁸

This report implies the need to consider empty sella in those with intractable vomiting and hyponatremia. We report a case where an elderly presented with recurrent vomiting and hyponatremia, evaluation suggestive of hyponatremia, hypocortisolism, hypothyroidism and diagnosed to have Empty sella syndrome.

MRI Image –





References-

1. API Textbook of Medicine, 10th edn.2015. p.587.
2. Harrison's Principles of Internal Medicine, 19th edn. New York, NY: McGraw-Hill; 2015. p.2257.
3. An Unusual Case of Intractable Vomiting: Unravelling the Present, Through the Past. Sagnik Biswas et.al. Journal of The Association of Physicians of India.Vol. 66. June 2018.
4. A case of hyponatremia in panhypopituitarism caused by the primary empty sella syndrome. Okuno S, Inaba M, Nishizawa Y, Miki T, Inoue Y, Morii H.Endocrinol Jpn. 1987 Apr; 34(2):299-307.
5. Recurrent Hyponatremia as the Presenting Feature of Empty Sella. Chih-Chien Sung et.al. J Med Sci 2010;30(3):111-114.
6. Tripathi M, Sanjeev C C, Roy A K. Chasing hyponatremia : unusual presentation. Neurol India 2001;49:197.
7. Study of prevalence of endocrine abnormalities in primary empty sella.Indian J Endocrinol Metab. 2013 Oct;17(Suppl 1):S125-6. doi: 10.4103/2230-8210.119527.
8. Empty sella syndrome – beyond being an incidental finding. Indian Journal of Endocrinology and Metabolism. 2012 Dec; 16(Suppl 2)S321.