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(CASE REPORT)

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Pituitary macro adenoma presenting as severe hyponatremia: A case report

M. Ben lafqih *, I. Bouizamarane, W. Douali, S. Rafi, G. El Mghari and N. El Ansari

Department of Endocrinology, Diabetes, Metabolic Diseases and Nutrition, Mohammed VI University Hospital, Marrakech, Morocco.

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Abstract

Hyponatremia in panhypopituitarism is multifactorial, it can be explained by the corticotropic deficit observed in pituitary insufficiency which is responsible for a lifting of inhibition on the anti-diuretic hormone with a consequent net reduction of water excretion, Hypothyroidism is also cited as a contributing mechanism for the development of acute hyponatremia in pituitary insufficiency through reduced free water excretion. Hyponatremia as a mode of revelation remains rare, we report a case of severe hyponatremia revealing pituitary insufficiency on pituitary macroadenoma.

Keywords: Hyponatremia; Macroadenoma; Corticotropic defecit; Hypothyroidism; Panhypopituitarism

1. Introduction

Hyponatremia in panhypopituitarism is multifactorial, involving corticotropic deficit, inappropriate secretion of antidiuretic hormone secondary to this deficit, and thyroid insufficiency, but hyponatremia as a mode of revelation remains rare. We report a case of severe hyponatremia revealing pituitary insufficiency on pituitary macro adenoma.

2. Observation

A aged 56 years, with no particular pathological history, was admitted to the emergency room for food vomiting, abdominal pain.

On examination the patient was pale, obnubilated and infiltrated with hypoglycemia. The workup revealed hyponatremia at 114mmol/l.

An adrenal insufficiency was suspected: a cortisolemia was done in the emergency room and came back to 3.26ug/dl .

The patient was referred to us, he was put on hydrocortisone hemisuccinate, the rest of the hypophysiogram showed the deficit of the other thyroid and gonadotropic lineages.

A pituitary MRI performed as part of the etiological workup showed a pituitary macroadenoma (figure1).

The introduction of a substitution treatment with hydrocortisone hemisuccinate and then levothyrox had allowed a good clinico-biological improvement.

* Corresponding author: maryame ben lafqih, Department of Endocrinology, Diabetes, Metabolic Diseases and Nutrition, Mohammed VI University Hospital, Marrakech,Morocco.

Figure 1 T1 coronal slice of pituitary MRI showing a pituitary macroadenoma of 10*6*6.8 mm

3. Discussion

The synthesis of anti-diuretic hormone (ADH) by the hypotalamus and its release by the post pituitary is inhibited by glucocorticoids [1, 2].

The severe and early hyponatremia in pituitary insufficiency can be explained by the corticotropic deficit observed in pituitary insufficiency which is responsible for a lifting of inhibition on the anti-diuretic hormone with a consequent net reduction of water excretion [3, 4].

Administration of hydrocortisone hemisuccinate allows normalization of natraemia probably by direct inhibition of the anti-diuretic hormone which supports this hypothesis [2, 4].

Hypothyroidism is also cited as a contributing mechanism for the development of acute hyponatremia in pituitary insufficiency through reduced free water excretion [2, 3, 5].

4. Conclusion

Severe hyponatremia should suggest adrenal insufficiency and should lead to performing a cortisolemia at the slightest doubt.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

I declare no conflict of interest.

Statement of Informed consent

Informed consent was obtained from all individual participants included in the study.

References

[1] Oelkers W(1989). Hyponatremia and inappropriate secretion of vasopressin (antidiuretic hormone) in patients with hypopituitarism. N Engl J Med 24;321(8):492-6

[2] Putterman C, Almog Y (1991). Inapropriate secretion of antidiuretic hormone in Sheehan's syndrome: a rare cause of postpartum hyponatremia. Am J Obstet Gynecol (165):1330–3

[3] Phuong-Chi T, Phuong-Anh T (2001). Sodium and water disturbances in patients with Sheehan's syndrome. Am J Kidney Dis 38(3) 23.

[4] El Ansari, N., El Adib, A. R, Younous, S. (2011). Acute clinicobiological manifestations of Sheehan's syndrome. Journal of Perinatal Medicine, 3(4), 189–193. doi:10.1007/s12611-011-0148-2

[5] Travernier B (2000) Acute adrenal insufficiency and adrenal function in intensive care patients. Update conferences. In: 42nd National Congress of Anesthesia and Resuscitation, pp 703–14