A Case Report: Effect of Hydrocortisone on Hypocorticolism Caused by Pituitary Adenoma

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INTRODUCTION

Pituitary adenoma are tumors of the pituitary gland and typically arise in the anterior pituitary. Pituitary adenoma can be classified according their size in micro adenomas (<10mm), macro adenomas (10mm), and giant adenoma (>40mm). Pituitary adenoma are divided into functioning and non-functioning according to the presence or absence of clinical syndrome resulting from hormonal hypersecretion. The prevalence of pituitary adenoma is estimated at 0.2% with the incidence is 2 cases out of 100,000 population. Meanwhile, the incidence of pituitary adenoma, both microadenoma and macroadenoma, is very rare in the population of children and adolescents, with a prevalence of 1: 1000.000. Clinical symptoms of pituitary adenoma develop due to hyperprolactinoma with or without hypopituitarism, as well as due to tumor mass effects. Hypopituitarism that often occurs is growth hormone deficiency and hypogonadism, whereas hypocorticolism was less common. The goals therapy of pituitary adenoma are normalize serum prolactin, remove or reduce tumor size, and improve hypopituitarism recovery. Treatment of hypocorticolism is given glucocorticoid replacement.

CASE REPORT

A 17 year old boy presented with loss of right eye vision, headache, and difficulty swallowing. During hospitalization the patient experienced mild depression. Magnetic resonance imaging (MRI) examination of the brain with contrast revealed an intracellar supratentorial extra-axial lesion extending to the suprasellar. Based on the results of the history, physical examination, laboratory examination and support, the patient was diagnosed with hophysis macroadenoma. MRI examination of the brain with contrast revealed a supratentorial extra-axial lesion in intrasellar extending to the supracellar, a defined border of 1.3 x 2.1 x 2.31 cm irregularity which pressed against the right optic nerve and optic chiasm and caused edema of the right optic nerve, which supports the appearance of pituitary macroadenoma (Figure 1). On laboratory examination, there was a hypocorticolism <0.5 μg / dL (reference value 4.30-22.40 μg / dL). Patients receive hydrocortisone therapy 200 mg / day, then tapering off to 100 mg / day. tapering off is done to avoid the side effects of giving high doses of hydrocortisone. In addition, patients received endoscopic endonasal transshenoidal hypophysectomy (EETH). Recommendation of hormonal replacement in adrenal crisis includes immediate administration of parenteral hydrocortisone via a bolus injection of intravena (IV) hydrocortisone 100 mg. This bolus should be followed by 200 mg of hydrocortisone per 24h. There was an increase in pre-treatment cortisol <0.5 μg / dL and 5.3 μg / dL post-treatment and there was no side effect while the patient was hospitalized.

DISCUSSION

Pasein presented an adrenal crisis, which characterized by hypotension, abdominal symptoms, nausea, vomiting, altered mental state, fatigue, fever, and laboratory abnormalities. Our patient presented with loss of right eye vision, headache, difficulty swallowing, and vomiting especially in the morning at admission. In addition, the patient also experienced hypocortisol <0.5 μg / dL (reference value 4.30-22.40 μg / dL). Patients receive hydrocortisone therapy 200 mg / day, then tapering off to 100 mg / day, tapering off is done to avoid the side effects of giving high doses of hydrocortisone. In addition, patients received endoscopic endonasal transshenoidal hypophysectomy (EETH). Recommendation of hormonal replacement in adrenal crisis includes immediate administration of parenteral hydrocortisone via a bolus injection of intravena (IV) hydrocortisone 100 mg. This bolus should be followed by 200 mg of hydrocortisone per 24h. There was an increase in pre-treatment cortisol <0.5 μg / dL and 5.3 μg / dL post-treatment and there was no side effect while the patient was hospitalized.

CONCLUSION

Hydrocortisone is a therapy used for hypokoricolism in pituitary adenomas. The hydrocortisone given is a high dose of hydrocortisone, so to stop the therapy, tapering off is done to avoid side effects.

REFERENCES