

ADRENAL ATROPHY SECONDARY TO INAPPROPRIATE ORAL ADMINISTRATION OF EXOGENOUS STEROID PRESENTING WITH HYPERCALCEMIA

Ayla Güven¹, Suna Kılınç¹, Didem Helvacıoğlu¹, L.İhsan Kuru²

Göztepe Training and Research Hospital, Pediatric Endocrinology Clinic ¹, Radiology Clinic ¹, Istanbul, Turkey

Background:

Glucocorticoids are one of the most widely used drugs in clinical practice. Inappropriate use can result in secondary adrenal insufficiency. Adrenal insufficiency can be an occult cause of hypercalcemia.

Case Presentation:

A 3-months-old boy admitted for puffiness of the face, increase in weight. It was revealed that the patient was admitted to a hospital 2 months ago and was diagnosed to have congenital cataract and operated. The patient was then put on 5 mg prednisolone per daily. On examination, patient has symptoms of Cushing Syndrome in the form of moon face and obesity. In laboratory, ACTH was <5 pg/mL and with low dose stimulation test peak cortisol response was 2.1 g/dL. Additionally, he was found to have calcium of 13.5 mg/dL (N: 9–10.6). Parathyroid hormone was appropriately suppressed, vitamin D level was normal and urinary calcium-to-creatinine ratio was increased. An ultrasound scan of the abdomen and chest radiograph showed no detectable abnormalities that could cause hypercalcemia except for bilateral adrenocortical atrophy. No underlying neoplastic or inflammatory process was identified. We excluded all causes of hypercalcemia including CYP24A1 deficiency. ACTH stimulation test was indicative of adrenocortical insufficiency. The hypercalcemia resolved with glucocorticoid supplementation. Now he is 9-months-old and treated with replacement hydrocortisone. He is being carefully monitoring for recovery of the hypothalamic-pituitary-adrenal axis and followed up in outpatient clinic with aim to try to gradually decrease his oral hydrocortisone replacement and restore normal adrenal function.

Conclusion:

This case illustrates the importance of considering adrenal insufficiency as a possible cause of unexplained hypercalcemia in a patient with following withdrawal of long-term potent glucocorticoid. Although hypercalcemia is an infrequent presenting sign of adrenal insufficiency, it should be kept in mind.

