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A CASE REPORT ON GLUCOCORTICOID INDUCED CUSHING'S SYNDROME

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ABSTRACT

Cushing's syndrome is a rare condition that occurs when there is excess cortisol in the body. An estimated 10–15 of every million people are affected every year. Cushing's syndrome can be caused by endogenous overproduction of cortisol or exogenous corticosteroids (cortisol-like medications). This case report describes about a 26 year old patient with Cushing's syndrome induced by glucocorticoid (Dexamethasone).

KEYWORDS: Corticosteroids, Dexamethasone, Cushing's syndrome.

INTRODUCTION

Cushing's syndrome is a rare condition that occurs when there is excess cortisol in the body. Cortisol is a hormone normally made by the adrenal glands and is necessary for life. It commonly affects adults aged 20-50. An estimated 10 – 15 of every million people are affected every year. Cushing's syndrome can be caused by endogenous overproduction of cortisol or exogenous corticosteroids (cortisol-like medications). In addition, ectopic adrenocorticotropic hormone (ACTH) production is also a well-known cause of Cushing's syndrome. The most common cause of Cushing's syndrome include exogenous administration of glucocorticoids (e.g. Dexamethasone, Prednisone) prescribed to treat other disease (called iatrogenic Cushing's syndrome). Corticosteroids are an important class of naturally occurring and synthetic steroid hormones that affect virtually every aspect of human physiology. [1-7]

Case Report: A 26 year old male patient was admitted to our hospital with chief complaints of vomiting during the last 6 days; 5-6 episodes daily. He reported of having fatigue, loss of

appetite, decreased sleep for the last one month. He had no medical history. He reported a daily oral intake of dexamethasone containing tablet (Dexona 4mg) for weight gain during the last 3-4 months and also had habit of alcohol consumption. Upon examination the patient was noted with hepatomegaly, red rash over abdomen and on both legs, multiple linear erythematous striae over abdomen. He also had mildly elevated blood pressure (152/98 mmHg), low potassium level (2.9 mEq/L). Ultrasound abdomen and pelvis showed impression of mild hepatomegaly with grade II fatty changes. Dexamethasone suppression test showed higher cortisol level (1.84 µg/dl) and urinary excretion of free cortisol in 24 hour urine was also elevated. He was advised to stop intake of dexamethasone and symptomatic treatment was initiated. After few days of symptomatic treatment (Inj. Ondansetron, Inj. Pantoprazole, Tab. Ascorbic acid, Alokem cream, Tretinoin cream), the patient symptoms and abdominal striae were observed to be reduced. Blood pressure normalized (124/80 mmHg) and serum potassium level was found to be normal (4.0 mEq/L).

Figure 1 showing the suspected dexamethasone induced multiple linear erythematous striae over abdomen.

DISCUSSION

The patient was diagnosed for iatrogenic Cushing's syndrome as he was on continuous steroids. The diagnosis was established by the clinical presentation and the biochemical tests. Moreover, withdrawal of dexamethasone resulted in improvement of the patient condition. In this case, the patient developed adverse reaction after 3-4 month intake of glucocorticoid. Studies shows that taking corticosteroid medication in high doses over an extended period of time may result in exogenous Cushing's syndrome. These medications, such as dexamethasone have the same effects as does the cortisol produced in the body. A similar case was reported by A J Razenberg et.al describe a patient with a novel type of Cushing's

syndrome due to the chronic use of γ-Hydroxy butyric acid (GBH)[4]. Drug withdrawal resulted in reducing the symptoms which is the first step for management of drug induced Cushing's syndrome. However, re-challenge of drug was not done. The patient was counselled about the adverse effects of dexamethasone and management of disease condition and medication use.

In this case report, the multiple linear erythematous striae could not explained by alcohol consumption, because of improvement in patient condition, after withdrawing dexamethasone. In conclusion, the Cushing's syndrome regressed completely after the withdrawal of dexamethasone is suggestive of glucocorticoid induced Cushing's syndrome.

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