

Case Report

Iatrogenic Cushing's Syndrome Due to Misuse of Topical Steroids

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ABSTRACT

Background: Iatrogenic Cushing's syndrome is a disorder caused by overuse of steroid medications in supra physiological doses for a long period.

Case Report: A 6-month old female child was seen in the pediatric clinic for full faces, hypertrichosis, and overweight following 2 months use of topical Dermovate. Repeated levels of cortisol done at 8 a.m. were persistently low; measuring 40 n mol/L normal (150-630). That's fail to rise with short ACTH stimulation test.

Conclusion: Medical education programs which highlight the serious effects of steroid misuse with increase awareness among public and physicians should be undertaken. Stringent laws for restricting the over counter dispensing of harmful drugs by untrained persons should be established.

Keywords: Cushing's syndrome, iatrogenic misuse, topical steroid, children.

INTRODUCTION

Iatrogenic Cushing's syndrome may occur due to the overuse of potent steroids. [1-5] Children have greater risks of systemic side effects as they have a large surface area and significant impact on various metabolisms. The development of Cushingoid features depends on the potency and pharmacokinetics of the drug as well as the dose and duration of use. [6,7]

The Iatrogenic use of pharmacological agents is more common in developing countries as they lack the guidelines regarding dispensing of over the counter drugs. [7,8] It is important for the clinician to be aware of this possibility, Here in we report case of iatrogenic Cushing's syndrome in a 6-month old female child, whose parents brought her to

the clinic for fullness of the face, hypertrichosis and overweight following 2 months use of Dermovate cream; containing, Clobetasol propionate, a very potent cortisone.

CASE REPORT

A six-month old female infant was seen in the Pediatric clinic being brought by her parents for assessment of full faces. She was on topical Dermovate cream, containing Clobetasol propionate, very potent steroids for atopic dermatitis for almost two months. She was overweight with full faces and thin skin. Hypertrichosis was noted. She was normotensive (figure 1). Repeated levels of Cortisol done at 8 AM were persistently low, measuring 40 n mol / L normal (150-830) and ACTH concentration of 3 p mol / L

(normal, 5-15) that's fail to rise with short ACTH stimulation test.



Figure 1: A photograph of a 6-month-old female child after 2 months use of topical Dermovate. She has full face, hypertrichosis and overweight

DISCUSSION

Cushing syndrome, first described by Harvey in 1912, refers to signs and symptoms caused by excess free plasma glucocorticoids. Excess glucocorticoids can be from increased endogenous production or prolonged exposure to exogenous use of glucocorticoid products. While endogenous Cushing's syndrome is a rare disease, iatrogenic (drug-related or exogenous) Cushing's syndrome from glucocorticoid products is commonly seen in clinical practice. [9]

It is important for the Clinicians to be aware of the possibility of iatrogenic Cushing's syndrome regardless of the form of therapy. Withdrawal from chronic glucocorticoid therapy presents significant challenges. These include the possibility of adrenal insufficiency after discontinuation of steroid therapy, recurrence of underlying withdrawn, and the possibility of steroid withdrawal symptoms. [6-13]

This child represents the tip of the iceberg and a large number of other babies with a steroid usage go undetected. Guidelines for dispensing over the counter are lacking in the developing countries. [8] Kashirsagar et al [10] estimated that more than 30% of the prescriptions of the medical practitioners were irrational.

A prolonged misuse of potent steroid preparations in children may cause the suppressed hypothalamic-pituitary-adrenal axis (ACTH).

Traditionally, the withdrawal signs begin by reducing the glucocorticoid from the supraphysiologic to physiologic doses, i.e. 10-15 mg/m² a day of hydrocortisone or the equivalent. During this phase of withdrawal, the patients are not at risk of adrenal insufficiency nor most experience the symptoms of withdrawal. Many clinicians like to switch to hydrocortisone if possible. During the stage of withdrawal, it is appropriate to check the morning cortisol levels, which can be useful as a screening test for the adrenal insufficiency. [12,13]

For patients who have been on long-term glucocorticoid therapy, the risk for adrenal suppression can continue for months or even a year. The treatment for exogenous Cushing's syndrome is gradual withdrawal of the causative medication, with the aim of discontinuing the causative medication if possible. An individual with hypothalamic - pituitary - adrenal axis suppression as in our patient cannot increase steroid production appropriately during a medical illness or other stress and should receive stress dose of steroid to avoid adrenal crisis. [12,13]

CONCLUSION

In conclusion, iatrogenic Cushing's syndrome is disorder caused by overuse of steroid medication in supra physiological doses for a long period which might lead to hypothalamic-pituitary-adrenal axis suppression. Medical education programs which highlight the serious effects of steroid misuse with increase awareness among public and physicians should be undertaken. Stringent laws for restricting the over counter dispensing of harmful drugs by untrained persons should be established.

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