



## Iatrogenic Cushing Syndrome Secondary to Prolonged Topical Corticosteroid Therapy in an Infant with Atopic Dermatitis: A Case Report

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### ABSTRACT

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**Introduction** Cushing syndrome refers to the clinical manifestations resulting from chronic exposure to excess glucocorticoids. Iatrogenic forms account for the majority of cases observed in clinical practice. We report a case of iatrogenic Cushing syndrome induced by prolonged topical corticosteroid therapy in an infant. **Case Report** An 11-month-old infant was referred for excessive weight gain that had gradually developed over the past two months. Clinical examination revealed marked truncal obesity associated with a moon facies. Dermatological examination showed eczematous lesions on the face consistent with atopic dermatitis. Medical history revealed daily application of a high-potency topical corticosteroid for approximately six months. No other corticosteroid exposure was reported. Given the history of prolonged topical corticosteroid use and the suggestive clinical findings, a diagnosis of iatrogenic Cushing syndrome secondary to systemic absorption of topical corticosteroids was established. **Discussion** Iatrogenic Cushing syndrome secondary to topical corticosteroids remains rare but is likely underdiagnosed. Infants represent a particularly vulnerable population due to their relatively large body surface area compared to body weight, thin skin, and immature skin barrier function. This case highlights the importance of parental education regarding the appropriate use of topical corticosteroids and the need for regular medical follow-up. **Conclusion** Iatrogenic Cushing syndrome secondary to topical corticosteroids should be considered in any infant presenting with excessive weight gain or cushingoid facies while receiving topical corticosteroid therapy. Prevention relies on appropriate prescribing, limited treatment duration, and careful clinical monitoring.

### KEYWORDS:

Iatrogenic Cushing syndrome; Topical corticosteroids; Atopic dermatitis; Infant; Systemic absorption

### INTRODUCTION

Cushing syndrome encompasses the clinical manifestations resulting from chronic exposure to excessive glucocorticoids [1]. Iatrogenic forms account for the majority of cases encountered in clinical practice. Although systemic glucocorticoids are most commonly implicated, topical corticosteroids may also cause significant systemic adverse effects, particularly in infants. Atopic dermatitis is a chronic inflammatory skin disorder commonly treated with topical corticosteroids. While these medications are generally safe when used according to current recommendations, prolonged

or inappropriate use may lead to severe endocrine complications. We report a case of iatrogenic Cushing syndrome induced by prolonged topical corticosteroid therapy in an infant.

### CASE REPORT

An 11-month-old infant was referred for excessive weight gain that had progressively developed over the previous two months.

Physical examination revealed marked truncal obesity associated with a moon facies. The growth chart demonstrated a recent acceleration in weight gain. Dermatological examination showed eczematous lesions on the face consistent with atopic dermatitis.

The mother's history revealed daily application of a high-potency topical corticosteroid for approximately six months. No other corticosteroid treatment was reported.

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Given the history of prolonged topical corticosteroid exposure and the characteristic clinical findings, a diagnosis of iatrogenic Cushing syndrome secondary to systemic absorption of topical corticosteroids was established.



The topical corticosteroid was gradually discontinued, and the patient was referred for specialized management with close endocrinological follow-up.



### DISCUSSION

Iatrogenic Cushing syndrome secondary to topical corticosteroid therapy remains a rare but probably underdiagnosed condition. Infants are particularly vulnerable because of their relatively large body surface area in relation to body weight, thin skin, and immature skin barrier function. Systemic absorption depends on several factors, including the potency of the corticosteroid, duration of treatment, frequency of application, extent of skin involvement, integrity of the skin barrier, and the use of occlusive dressings.

In atopic dermatitis, impairment of the skin barrier further increases percutaneous drug absorption. Prolonged exposure may suppress the hypothalamic–pituitary–adrenal (HPA) axis, resulting in clinically significant hypercortisolism.

Several cases of iatrogenic Cushing syndrome have been reported in infants treated with topical clobetasol propionate or betamethasone applied over large body surface areas. In some cases, withdrawal of treatment was complicated by secondary adrenal insufficiency.

This case highlights the importance of educating parents on the appropriate use of topical corticosteroids and emphasizes the need for regular medical follow-up.

### CONCLUSION

Iatrogenic Cushing syndrome secondary to topical corticosteroids should be considered in any infant presenting with excessive weight gain or the development of cushingoid

facies during topical corticosteroid therapy. Prevention relies on appropriate prescribing, limiting the duration of treatment, and careful clinical monitoring.

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