

## Association of Psoriasis with Cushing's Syndrome

Çiğdem TURA BAHADIR, Feyzi GÖKOSMANOĞLU, Elif KILIÇ KAN, Gülçin CENGİZ ECEMİŞ, Ayşegül ATMACA, Hulusi ATMACA, Ramis ÇOLAK  
Ondokuz Mayıs University School of Medicine  
Department of Endocrinology and Metabolism  
Samsun, TURKEY

### OBJECTIVES

Psoriasis is a chronic, inflammatory and T-cell mediated autoimmune disease of skin. Its prevalence is 2-3%. It may improve due to immunosuppressive effects of hypercortisolemia during the active phase of Cushing's syndrome (CS) and may exacerbate after treatment. The aim of this study was to investigate association of psoriasis with CS.

### METHODS

We prospectively followed 62 patients who had been diagnosed with CS between 2010 and 2014 in our clinic. Of the patients, 60% was Cushing disease (CD) (29 female, 8 male) and 40% was ACTH-independent CS (20 female, 5 male). The patients were evaluated for psoriasis.

### RESULTS

The prevalence of psoriasis was 5% among our patients with CS. Psoriasis was diagnosed in three patients; two had pituitary adenoma and one had adrenal adenoma. Two were diagnosed before treatment of CD, and the other was diagnosed after two years following remission of ACTH-independent CS. The pathological evaluation of two patients with CD was reported as densely granulated corticotrophic adenoma and the pathological evaluation of the patient with ACTH-independent CS was reported as adrenocortical adenoma with nuclear pleomorphism and possible malignant behavior. In the light of these findings, potential hypersecretory tumours should be considered. Features of our patients are shown in Table 1.

Table 1: Diagnosis time of psoriasis and features of CS in our patient population

Time of diagnosis for psoriasis	Postoperative state of disease	Tumor Location	Basal ACTH (pg/ml)	Basal cortisole (µg/dl)	1mg DST (µg/dl)	Pathology
1 postoperative	new diagnosis	adrenal adenoma	1	24	26	nuclear pleomorphism, possible malignant behavior
2 preoperative	exacerbated	pituitary adenoma	78	19	13,6	densely granulated corticotrophic adenoma
3 preoperative	unexacerbated	pituitary adenoma	103	28	11,7	densely granulated corticotrophic adenoma

ACTH: Adrenocorticotrophic hormone DST: Dexamethasone suppression test

### CONCLUSIONS

Endogenous hypercortisolism suppresses inflammatory response and induces a state of immunosuppression. Once cortisol levels come back to normal following remission of CS, rebound response of immunity may result in exacerbation of autoimmune diseases like psoriasis. Prevalence of psoriasis is elevated in CS. If the patient is known to have a history of stress-responders psoriasis prior to surgery, we should evaluate the patient more carefully and frequently for exacerbation of psoriasis after remission of CS. Autoimmune diseases may exacerbate or may be newly diagnosed because of rebound immunity in remission of CS.

