

**The impact of Topical
Calcipotriol and
Betamethazone on
Human β -Defensin 2
Expression and Serum
Level in Psoriatic
Patients**

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The most commonly used medications to treat localized plaque psoriasis are topical corticoids. Vitamin D3 analogs (e.g., calcipotriol) are coming into wide use recently. As defensins are dysregulated in psoriasis, the present work aimed at assessment of the impact of topical betamethazone with and without calcipotriol on human β -defensin 2 (*hBD-2*) expression and serum level in a cohort Egyptian psoriatic patients. A biopsy was performed at the site of psoriatic plaque for all patients participating in the study before application of any treatment. Patients were divided into two groups each of 25 psoriatic patients. The first group used an ointment containing combined calcipotriol and betamethasone dipropionate for 4 weeks while the second group used an ointment containing betamethasone valerate for the same period. For all patients, human β defensin-2 expression and serum level was assayed before and after either treatment courses. No statistical significance was detected between both groups as regards PASI score, *hBD-2* expression or serum level before application of either treatment regimens, while a statistically significant difference was detected as regards PASI score, *hBD-2* expression and serum level after topical treatment. In conclusion, psoriasis treatment using the combined Calcipotriol and betamethasone therapy is superior in effect to monotherapy using betamethasone alone as indicated by the diminished *hBD-2* expression and serum level in

conjunction with clinical decline of PASI score in those using the combined treatment more than those on monotherapy. In addition, serum *hBD-2* might be a useful marker for disease activity in psoriasis that can help assessing the patient's clinical condition.