

## Mucosal Desquamation in Psoriasis

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Urinary epithelial cell counts were determined in 102 patients with active plaque psoriasis. Cell counts were significantly higher in psoriatic patients than in the controls. A significant fall in the cell counts was observed after regression of psoriasis.

**Key words:** Epithelial cells.

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Psoriasis affects mostly the skin, and mucosal involvement is very rare. Clinically recognizable lesions may not be appreciated in the mouth or on the genitalia. Asymptomatic involvement in the mucosae is very difficult to confirm, but recently involvement of the urinary tract has been documented. Arenberger & Buchtova (1) found significantly elevated urinary tract epithelial cell counts in patients with psoriasis, compared with healthy subjects.

The present study was conducted in the same context in the hope of finding mucosal shedding in untreated patients with active psoriasis and the effect of topical treatment.

### MATERIAL AND METHODS

Urine samples were collected in the morning (to get the maximum yield) from untreated patients with active plaque psoriasis (70 men and 32 women) and healthy controls (55 men, 51 women). Neither duration nor the extent of the disease was considered for inclusion in the study. To exclude non-specific findings, subjects were carefully examined to rule out any other disease, particularly a urinary tract disease. All mucosal surfaces were thoroughly examined. A constant volume of urine was taken, concentrated to 10 times and epithelial cell counting was done in a Neubauer's counting chamber using  $\times 100$  magnification. The percentage of skin area involved was calculated by Wallace's Rule 9. New samples were collected from some patients (19 men, 10 women) after 4-6 weeks of treatment when the disease had shown definite improvement.

### RESULTS

Details illustrating the effects of remission are given in Table I. None of the patients had any clinically detectable lesions on the buccal or genital mucosa. The proportion of body surface involved by the disease was less than 50% in 83 patients, while the remaining 17 had more than 50% involvement. On average, there were 25 cells per ml of concentrated urine in healthy men compared with 330 cells in same volume of urine of men with psoriasis. Similarly there were on average, 97 cells in the urine of healthy women, as compared with 788 cells in psoriatic women. The differences for both sexes were statistically significant compared with cell counts from patients compared with controls as calculated by the paired *t*-test. A significant fall in the number of cells associated with clinical improvement was seen in all patients, compared with pre-treatment values: 64 in men and 92 in women.

### DISCUSSION

In the present study, though none of the patients had clinical evidence of mucosal involvement, significantly higher cell counts indicated asymptomatic mucosal desquamation of the urinary tract. Similar desquamation may also occur in other mucosae. Although mucosal involvement is regarded as rare in psoriatic patients (2), more evidence of it may come to light if methods other than clinical are applied. Reversion of cell counts to near normal following treatment further indicates that mucosal desquamation definitely occurs in the active form of the disease.

### REFERENCES

1. Arenberger P, Buchtova L. Urinary tract desquamation in psoriasis. *Dermatologica* 1990; 180: 112.
2. Baker H. Psoriasis. In: Rook A, Wilkinson DS, Ebling FJG, Champion RH, Burton JL, eds. *Textbook of Dermatology*, 4th ed. Bombay: Oxford University Press, 1987: 1469-1532.

Table I. Effect of remission on urinary epithelial cell counts in psoriatics

	Controls		Before treatment		After treatment	
	Men (n = 55)	Women (n = 51)	Men (n = 70)	Women (n = 32)	Men (n = 19)	Women (n = 10)
No. of epithelial cells	25	97	330	788	64	93
(Mean $\pm$ SD)	27	70	264	743	75	65
Age	34	34	34	31	40	34
(Mean $\pm$ SD)	14	15	14	13	13	14

\*  $p < 0.001$ .