

Psoriasis of the Palms and Soles is Frequently Associated with Oropharyngeal *Candida albicans*

ROBERT B. SKINNER, Jr.¹, E. WILLIAM ROSENBERG^{1,2} and PATRICIA W. NOAH^{1,3}

Departments of ¹Medicine (Dermatology), ²Community Medicine, and ³Pathology, University of Tennessee College of Medicine, Memphis, Tennessee, USA

Patients seen at our psoriasis clinic are studied for the possible presence of microbial factors that might be activating the disease. We have previously reported associations between certain clinical variations in the appearance of psoriasis and specific microbial findings (1).

Here we report 14 patients in whom palmar/plantar psoriasis was associated with the recovery of *Candida albicans* on culture from their throat and/or dental plate (Table I).

TREATMENT

Patients were treated with oral nystatin, fluconazole, or ketoconazole. Nine patients were evaluable following adequate treatment. Of these, 7 were cleared or substantially improved.

DISCUSSION

Baker (2) and Crutcher et al. (3) have previously reported the usefulness of oral nystatin in the treatment of psoriasis, presum-

Table I

Case no.	Age	Sex	Dur- ation	Clinical description	<i>C. albicans</i> culture	Dental plate present	Treatment	Response
1	40	M	17 y	Red palms	+ Throat	-	Fluconazole	No response
2	63	F	20 y	Thick scale soles & palms, moderate erythema	+ Throat & dental plate	+	Nystatin	Improved
3	37	F	5 y	Scaly, red palms & soles	+ Throat & dental plate	+ (5 years)	Fluconazole	Pending
4	64	F	8 m	Thick palms & soles	+ Throat	-	Nystatin	Pending
5	39	F	5 y	Red, thick scale on palm	-	+	Ketoconazole	Cleared
6	49	M	-	Red, cracked fissured palms	-	-	Fluconazole, nystatin	Lost to follow-up
7	69	F	10 m	Red palms	+ Throat & dental plate	+	Nystatin	No help
8	43	M	6 m	Scaly palms	-	-	Nystatin, ketoconazole	Nystatin no help; ketoconazole improved
9	30	F	6 m	Very red, scaly palms & soles; pustules on feet	+ Throat	-	Nystatin Ketoconazole Fluconazole	Ketoconazole improved fluconazole cleared
10	37	F	2 y	Pink, scaly palms & soles	-	-	Nystatin yogurt	Improving
11	58	F	15 y	Red, scaly palms & soles	-	-	Nystatin	Lost to follow-up
12	56	F	1 y	Red, scaly palms & soles diabetes	+ Throat & dental plate	+	Ketoconazole, then fluconazole	Ketoconazole improved; fluconazole improved further
13	69	F	10 y	Red palms	+ Throat & dental plate	+	Nystatin	Cleared
14	57	F	6 m	Red palms	+ Throat & dental plate	+	Nystatin	Pending

ably by virtue of its effects on *Candida* residing in the gastrointestinal tract.

Wachowiak (4) found *Candida* more prevalent in stools of psoriasis patients than in controls. Hanel et al. (5) found an increase in phospholipase A activity of *Candida albicans* strains isolated from the intestines of patients with psoriasis. Treatment with methotrexate made mouse intestine more vulnerable to candidal adherence (6).

Duvic et al. (7) reported the appearance of a psoriasis-like picture on the palms and soles in 6 of 20 patients who were being treated with intravenous glucan (an aqueous extract of yeast cell wall) in an attempt to stimulate their reticulo-endothelial system.

Patients with dental plates were advised to purchase an ultrasonic cleaning device for their dentures (Tatung Corp of America, Marietta, Ga). The use of such a device has been shown to reduce the numbers of recoverable yeasts from dental plates (8).

CONCLUSION

Psoriasis of the palms and soles is frequently associated with oropharyngeal candidal carriage.

Management of these patients can be successfully achieved with the use of oral antifungal drugs and attention to candidal carriage on their dentures.

ACKNOWLEDGEMENT

We wish to thank Mrs. Sheila Short for secretarial assistance in preparation of this manuscript.

REFERENCES

1. Rosenberg EW, Noah PW, Skinner RBJr, et al. Microbial association of 167 patients with psoriasis. *Acta Derm Venereol* (Stockh) 1989; 146: 72-75.
2. Baker SM. Nystatin for the treatment of psoriasis. Presented at the *Candida albicans* Conference, Dallas, 1982.
3. Crutcher N, Rosenberg EW, Belew PW, et al. Oral nystatin in the treatment of psoriasis. *Arch Dermatol* 1984; 120: 433.
4. Wachowiak M, Stryker GV, Marr V, et al. The occurrence of monilia in relation to psoriasis. *Arch Derm Syphil* 1929; 19: 713.
5. Hanel H, Menzel I, Holzmann H. High phospholipase A-activity of *Candida albicans* isolated from the intestine of psoriatic patients. *Mycoses* 1988; 31: 451-53.
6. Sandovsky-Losica H, Segal E. Interactions of *Candida albicans* with murine gastrointestinal mucosa from methotrexate and 5-fluorouracil treated animals: in vitro adhesion and prevention. *J Med & Vet Mycol* 1990; 28: 279-87.
7. Duvic M, Reisman M, Finley V, et al. Glucan-induced keratoderma in acquired immunodeficiency syndrome. *Arch Dermatol* 1987; 123: 751-56.
8. Burnett E. Use of ultrasonic cleaner in denture stomatitis. Presented at National Medical Association, annual meeting 1992, San Francisco.