

Smoking and Psoriasis: How Strong is the Connection?

Recent studies help elucidate how smoking affects psoriasis and how the skin condition may be connected to other health matters.

By Ted Pigeon, Associate Editor

Many patients know that associated risks of cancer and emphysema make cigarette smoking detrimental to one's health, but dermatologists know it also affects the skin. Smoking has been associated with many dermatologic conditions and cutaneous effects. These include poor wound healing, wrinkling and premature skin aging, squamous cell carcinoma, hair loss, and oral cancers.¹ Recent studies have also shown a link between cigarette smoking and psoriasis, in particular, demonstrating a correlation between how much a patient smokes and the severity of his or her psoriasis.^{2,3,4}

These studies highlight the potential role of the dermatologist in influencing overall patient health. Some question to what extent dermatologists should advise patients about basic healthcare issues, such as diet, exercise, and smoking. Taking a closer look at these studies may prove helpful for dermatologists advising and treating patients with psoriasis.

Strong Correlation

A study in the December issue of *Archives of Dermatology* evaluated the association between different components of smoking history and the severity of psoriasis.² The study involved 818 adult patients with psoriasis whose clinical severity of psoriasis was measured using the Psoriasis Area and Severity Index (PASI) over the course of two years. Data showed that smok-

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ing more than 20 cigarettes a day was associated with a more than two-fold risk of clinically more severe psoriasis versus smoking 10 or fewer cigarettes a day.

Results indicated that patients with psoriasis who smoke are more likely to have more severe psoriasis. "The results of this study suggest a negative effect of cigarette smoking on the severity of psoriasis, in particular among females," says study co-author Cristina Fortes, PhD, of the Istituto Dermatologico dell'Immacolata, Istituto di Ricovero e Cura a Carattere Scientifico, in Rome and the University of Montreal. "These findings might be of clinical importance since they would support the dermatologist's recommendation to psoriatic

patients to quit smoking in order to prevent worsening of their psoriasis." Dr. Fortes emphasizes that based on the results of this and other similar studies, dermatologists should educate their patients about the potential dangers of smoking and how it could affect their psoriasis. Although this current study did not determine whether smoking causes psoriasis, other studies have explored that question.

"It has been long known that smoking induces functional and morphological alteration of polymorphonuclear leukocytes and it may also cause an exaggerated release of chemotactic factors," Dr. Fortes says. She also advises that dermatologists explain to their patients that smoking

induces an overproduction of IL-1b and increases the production of TNF- α and TGF- β , which has been associated with psoriasis severity. Though it doesn't guarantee anything, the cessation of smoking may help prevent psoriasis from becoming more severe, Dr. Fortes says. Plus, smoking cessation obviously contributes positively to overall health.

Several reviews and studies in the past year have yielded similar results regarding the impact that cigarette smoking may have on psoriasis, especially in women. One recent review found that women who are smokers have an up to 3.3-fold increased risk of developing plaque-type psoriasis, leading researchers to conclude that dermatologists should strongly discourage smoking among psoriasis patients.³

Quality of Life

Overall patient health may be associated with quality of life of patients with psoriasis, another area of recent

research. "Since curing psoriasis is seldom achieved, and the impact of psoriasis on patient health-related quality of life is dramatic, decreasing the severity of psoriasis by reducing smoking or quitting can improve a patient's quality of life," says Dr. Fortes. In other words, smoking cessation may not reduce psoriasis, but it could prevent it from getting worse, thus enhancing the patient's quality of life.

The issue of quality of life has always been important, since dermatologists are aware that psoriasis is much more than a cosmetic concern and strongly affects a patient's view of him or herself and quality of life. Another study published in *Archives of Dermatology* analyzed the impact of both smoking and obesity on psoriasis presentation and management. Researchers found a high prevalence of obesity and smoking in this psoriasis cohort.⁴

The question is whether health issues such as obesity plays a role in causing or worsening psoriasis, or if

they are a result of the condition. The study found that smoking seems to have a role in the onset of psoriasis, but obesity does not.⁴ Therefore, although obesity is a nationwide health concern, it may be a result of negative quality of life resulting from the severity of psoriasis.

Smoking, on the other hand, may play a more crucial role in increasing the severity of psoriasis or perhaps contributing to the cause of the disease.^{1,3} Dr. Fortes thinks that the results of these studies are strong enough to warrant more attention to the issue, and she recommends the conduction of cohort studies in which psoriasis is the outcome. Additionally, she says, smoking history should be in clinical trials because it could be a possible modifier of treatment effects.

Thank You For Not Smoking

According to Dr. Fortes, it would be very beneficial for dermatologists to educate psoriasis patients about the dangers of smoking, since it is ultimately up to patients to stop. As more studies continue to show the negative effects of smoking on psoriasis, dermatologists should keep their patients informed not just about the dangers of smoking in general, but also about its impact on the severity of the disease. Perhaps if more patients are aware of smoking's effects on their disease, they may be more likely to quit smoking, and thus prevent both the disease and their quality of life from becoming worse. ❧

New In Your Practice

Two Timers. For patients with moderate to severe chronic plaque psoriasis unresponsive to alefacept, consider a second course (JAAD 54: 61- 63). Researchers examined the clinical response to repeat treatment with alefacept in psoriasis patients who previously failed to achieve a clinical response. Of 327 patients who received two treatments, 19% achieved a PASI 75 and 53% achieved PASI 50. Compared to controls, patients receiving alefacept were 2.6 times more likely to achieve PASI 75 and 2.3 times more likely to achieve PASI 50.

First-Line of Treatment. Gamcitabine shows promise for the treatment of CTCL. In a phase II study (Cancer; 104: 2437- 2441), 32 patients with advanced untreated CTCL received gamcitabine 1200mg/m/day on days 1, 8, and 15 of a 28-day cycle for a total of six cycles. Complete response rate was 22% and partial response rate was 53%, with median progression-free survival of 10 months, and median overall survival of 19 months.

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3. Behnam SM, Behnam SE, Koo JY. "Smoking and Psoriasis." *Skinmed*. 2005 May-Jun; 4(3): 174- 176
4. Herron MD, et al. "Impact of Obesity and Smoking on Psoriasis Presentation and Management." *Archives of Dermatology*. 2005; 141: 1527- 1534