

## PERSPECTIVE



## Don't be superficial

Severe psoriasis carries cardiovascular risks. Dermatologists should consider more than just patients' outer layers, argues **Henning Boehncke**.

With a prevalence of about 2–3% in the Western world, psoriasis is a common disease<sup>1</sup>. Its clinical hallmark is the presence of well-defined red, scaly plaques, which can cover all parts of the body. But the influence of psoriasis extends beyond the skin — the disease's negative impact on psychological and physical well-being is as dramatic as that of cancer, diabetes, arthritis or any other major chronic medical condition<sup>2</sup>. Around a quarter of patients eventually go on to develop psoriatic arthritis, a progressive inflammatory joint disease that causes pain and joint damage and eventually results in disability. And there is mounting evidence connecting psoriasis with adverse cardiovascular and metabolic conditions. Too few doctors — dermatologists and general practitioners alike — are aware of these systemic effects, and how to deal with them.

### MOUNTING EVIDENCE

Although epidemiologic studies have long documented an association between psoriasis and various other health problems, definitive evidence of increased morbidity and mortality surfaced only around six years ago<sup>3</sup>. The effect is most pronounced with cardiovascular disease, and is also connected to severity: patients with severe psoriasis have a higher rate of myocardial infarction than those with mild disease. However, the increased rate of mortality might not be due to cardiovascular disease alone. Rather, psoriasis patients accumulate cardiovascular risk factors such as diabetes, hypertension and obesity, all of which are part of what is called metabolic syndrome. And this syndrome is more common among psoriasis patients than non-psoriatic people.

Evidence that psoriasis is an independent cardiovascular risk factor is mounting. Epidemiologic studies document at least a 50% increase in cardiovascular risk in patients with psoriasis compared with controls<sup>4</sup>. Psoriasis patients have been shown to carry elevated levels of biomarkers for inflammation and cardiovascular risk, such as C-reactive protein; in fact, the more severe the case of psoriasis, the higher the level of this protein<sup>5</sup>. The coronary arteries of psoriasis patients are more often calcified (and to a more profound extent) than the arteries of those without psoriasis<sup>6</sup>. Similarly, the aorta and peripheral blood vessels of psoriasis patients show signs of atherosclerosis and are significantly stiffer than the arteries and veins of non-psoriatic individuals<sup>7</sup>. These associations seem to be restricted to those patients with the most severe psoriasis — patients who receive or have received systemic medication, have undergone phototherapy, or have had in-patient treatment. Patients with mild disease do not generally face a substantially increased risk.

Although the specific mechanisms through which psoriasis impairs cardiovascular health are still under debate, the linkage itself has been firmly established and thoughts must turn to therapies. It might be

possible to reduce atherosclerosis and cardiovascular risk by treating psoriasis with systemic anti-inflammatory drugs. However, that prospect remains distant. What doctors can do now is improve the basic management of patients with severe psoriasis.

### CHANGING CLINICAL PRACTICE

The National Psoriasis Foundation, a research and advocacy organization based in Portland, Oregon, asked its advisory board to compile a checklist to assess patients' cardiovascular risk profile. This checklist was published<sup>8</sup> in 2008, and comprises a few simple but telling items: pulse rate, blood pressure, blood lipid and glucose levels, and either body mass index or some other gauge of a person's weight. This is a manageable routine for any dermatology practice.

It is not just dermatological specialists who need to be aware of the link between severe psoriasis and cardiovascular risk. Family doctors see patients on a more regular basis, and set targets for blood pressure and lipid levels. These physicians need to realize that psoriasis predisposes a patient to cardiovascular disease. A blood pressure of 140/90 mmHg is tolerable in a patient whose only risk factors are smoking and obesity. However, if this patient also suffers from severe psoriasis, blood pressure should be 120/80 mmHg to yield a comparable cardiovascular risk. Similarly, the therapeutic target for blood lipids is influenced by the number of cardiovascular risk factors. As in the case of blood pressure, lipid levels must be more rigorously controlled if the patient displays more risk factors.

It remains an open question whether there are pathogenetic links between psoriasis and atherosclerosis, or whether long-term systemic therapy can lower cardiovascular risk. Clinicians do not need to wait for certainty on these points. Dermatologists should start assessing their psoriatic patients for cardiovascular risk factors, and doctors more generally should take psoriasis into account when defining therapeutic targets for conditions such as hypertension and hyperlipidaemia. Failure to do so will put lives at risk. ■

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