

Psoriasis, Overweight and Metabolic Syndrome

KJERSTI DANIELSEN

Cornell University, Ithaca, NY, USA. E-mail: kjerstidanielsen2007@hotmail.com

Kjersti Danielsen, dermatologist from the University Hospital of Northern Norway, recently defended her dissertation "Psoriasis, overweight and metabolic syndrome - The Tromsø Study" for the degree of Ph.D. at University of Tromsø, the Arctic University of Norway on May 28, 2014. Her supervisors were Anne-Sofie Furberg, Anne Olaug Olsen, and Tom Wilsgaard. Opponents were Lone Skov (Copenhagen), Pål Richard Romundstad (Trondheim) and Tormod Brenn (Tromsø). Dr Danielsen is presently a postdoc at Cornell University.

Recently it has been suggested that the chronic inflammatory disease psoriasis is more than skin deep, as it has been associated with several diseases, including diabetes and cardiovascular disease. Psoriasis can be attributed to genetic liability as well as environmental risk factors. The overall aim of the thesis was to study time trends in psoriasis prevalence and investigate whether excess weight was associated with psoriasis development, including potential synergisms with smoking. Furthermore, the association between psoriasis and the metabolic syndrome, a predictor for diabetes and cardiovascular disease, was explored; all within the population-based North Norwegian Tromsø study cohort surveyed five times from 1979 to 2008.

In the first study, a gradual increase in the self-reported prevalence of psoriasis was observed among adults >29 years old over a period of 30 years; with more than doubled odds of psoriasis reported in 2007–2008 as compared with 1979–1980, independent of the investigated birth cohort and population ageing (1). The lifetime prevalence of psoriasis was 11% among adults in the 2007–2008 survey. This increasing trend could partially be due to increased awareness of the disease in the population; however, the results are also supported by others, indicating a possible global trend.

The second study explored the relationship between overweight and the risk of psoriasis development in a 7–13 year follow-up in both genders, also including analysis of potential synergisms between smoking and overweight (2). The study supported that the cumulative effect from smoking and obesity on psoriasis development may explain some of the increase in psoriasis observed in the Tromsø study as well as in comparable populations.

When investigating the association between psoriasis and the metabolic syndrome in the 2007–2008 survey, there was a uniformly higher prevalence of the metabolic syndrome in both genders among psoriatics compared to persons never reporting the condition across all age groups (3). Men with psoriasis had a stable 35% increased odds of metabolic syndrome compared to persons without psoriasis, while young



Fig. 1. Kjersti Danielsen defended her thesis "Psoriasis, overweight and metabolic syndrome" on May 28, 2014 in Tromsø, Norway.

women with psoriasis displayed a 4 times increased odds of developing the metabolic syndrome. Abdominal obesity was the most common metabolic syndrome component associated with psoriasis in women, and there was a dose-response relationship between the severity of psoriasis and the odds of abdominal overweight in women. The findings suggest possible age and gender variations in the risk of metabolic syndrome among individuals with psoriasis. Given the high prevalence of psoriasis and the elevated burden of metabolic syndrome in this patient group, there may be a benefit from targeted screening of metabolic syndrome among individuals with psoriasis regardless of age and disease severity.

Literature

1. Danielsen K, Olsen AO, Wilsgaard T, Furberg A-S. Is the prevalence of psoriasis increasing? A 30-year follow-up of a population-based cohort. *Br J Dermatol* 2013; 168: 1303–1310.
2. Danielsen K, Wilsgaard T, Olsen AO, Furberg A-S. Overweight and weight gain influence psoriasis development in a population-based cohort. Submitted manuscript.
3. Danielsen K, Wilsgaard T, Olsen AO, Eggen AE, Olsen K, Cassano PA, Furberg A-S. Psoriasis and the metabolic syndrome – a population-based study of age and gender differences. *Br J Dermatol* 2014 Jul 24. doi: 10.1111/bjd.13288. [Epub ahead of print].