Reviewer’s report

Title: Trends in lipid profiles in patients with psoriasis: a population-based analysis

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Reviewer: Ole Ahlehoff

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Trends in lipid profiles in patients with psoriasis: a population-based analysis

Thank you very much for the opportunity to review the paper.

The paper aims to assess changes in lipid profile related to onset of psoriasis.

This is generally a well written paper on an interesting topic. The paper supports previous reports on the association between dyslipidaemia and psoriasis.

The methods used are appropriate and clearly reported.

Major limitations are related to: classification of psoriasis disease severity, lack of information on comorbidities, risk factors, low no. of measurements per patient, and uncertainty related to time of psoriasis-onset.

*Major compulsory revisions:

INTRODUCTION

“The aim of this study was to determine the effect of psoriasis onset on serum lipid profiles by comparing lipid profiles in patients with psoriasis and non-psoriasis subjects during the 5 years before and 5 years after psoriasis incidence/index date.”

1. Does the the psoriasis index date (as defined) equal the date of disease onset?

In general it is very difficult to ascertain the true time of onset for chronic diseases and the underlying disease mechanisms was certainly present prior to first medical contact.

Therefore the changes in serum lipid profiles before and after a specific date is likely to reflect changes in lipid management, lifestyle, and psoriasis treatments rather than the specific impact of psoriasis.

This, in my opinion, merits further discussion

RESULTS

A total of 963 Olmsted County, MN residents aged >35 years were diagnosed with psoriasis between 1/1/1988 and 1/1/2008.

2. Why were the analyses restrained to subjects aged > 35 years?

3. Please present the proportion of patients with other comorbidities and CV risk
factors.

“Of these, 689 patients had at least one lipid measure during the time period from 5 years before to 5 years after psoriasis incidence date and thus were included in the study (Table 1). The total number of lipid measurements in patients with psoriasis was 3,561 (median 3 measurements per patient).”

4. Please discuss the potential limitations related to assessing changes in serum lipid on the basis of a median of 3 measurements in a 10 year time span.

5. If lipid measurements related to hospitalizations were included please discuss the potential impact of temporary changes in serum lipids related to, e.g., acute illness.

“In addition, the prevalence of lipid-lowering drug use was similar among psoriasis and non-psoriasis subjects (37% vs. 39%, respectively; p=0.33).”

6. Where any differences observed related to choice of cholesterol lowering medication between groups?

7. The overall proportion of patients on lipid-lowering medication is very high. This may reflect a high proportion of CV/metabolic comorbidities.

“Data on systemic medication used was available in 551 of the 689 psoriasis subjects. Of these, 49 (8.9% of the 551) used systemic medication during the study period.”

8. Does this imply that the majority of patients included had mild psoriasis?

9. Where sub-analyses of patients in systemic anti-psoriatic treatment performed to evaluate if the observed differences were driven by these specific patients?

*Discretionary Revisions:

INTRODUCTION
- In general the authors may want to update the references to include recent observational studies on psoriasis and risk of cardiovascular events.

FIGURES
- The figures were not available in the online review system.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
'I declare that I have no competing interests'