Reviewer's report

Title: Weather conditions and Bell's palsy: Five - year study and review of the literature

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Reviewer: Dr Christian Sittel

Level of interest: A paper of limited interest

Advice on publication: Accept after revision, which I do not need to see

This paper investigates the correlation of weather conditions with the frequency of occurrence of acute idiopathic facial nerve palsies. A great multitude of meteorological data of a mediterranean region were sampled and classified in five "weather types". The incidence of episodes of Bell's palsy was then compared to these data. The authors conclude from there findings that there are no correlations between weather conditions and incidence of acute peripheral facial paralysis. The hypothesis that outside conditions like exposure to cold air might play a role in pathogenesis of Bell's palsy is actually one of the oldest theories trying to explain this up to now enigmatic entity. The authors are stating correctly that so far there are no scientific data to rule out this hypothesis. However, with increasing data supporting a viral etiology (with a focus on HSV-1) the possible influence of outside conditions is generally considered to be of only minor, if any importance. In addition, several studies could show a remarkably stable incidence of acute idiopathic facial paralysis throughout the world, regardless of climatic zones. So one could argue that this study is answering questions that have not been asked.

Data analysis and presentation seem appropriate, although a meteorologist might be more qualified to judge this for the greatest part of the material presented.

In summary, the scientific value of this study is quite low, although it is well conducted from a technical point of view. I was missing a theory about how all these meteorological parameters actually might trigger Bell's palsy. If weather conditions should play a role, why only at the day of occurrence of palsy, and not a couple of days before? Since the authors, as many before, did not find an association between weather and frequency of Bell's palsy, the final paragraph, in which further studies are demanded, clearly should be ommitted.

Competing interests:

None declared.