Effectiveness of Petasites hybridus preparations in the prophylaxis of migraine: a systematic review

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CRD summary
This review assessed the effectiveness of Petasites hybridus in the prophylaxis of migraine. The authors concluded that there is moderate evidence in support of the effectiveness for 3-4 months daily treatment with 150mg Petasites. This conclusion may not be reliable given the small number of identified trials.

Authors' objectives
To assess the effectiveness of Petasites hybridus in the prophylaxis of migraine.

Searching
MEDLINE, EMBASE and the Cochrane Library were searched from 1980 to the end of July 2005. Search terms were reported.

Study selection
Randomised controlled trials (RCTs) investigating preparations from Petasites hybridus in the prophylaxis of migraine were eligible for inclusion.

All trials contained the proprietary extract Petadolex, from the underground parts of Petasites hybridus, standardised to contain a minimum of 15% petasins and practically free of toxic pyrrolizidine alkaloids (content below 0.088 ppm). The included trials compared daily consumption of 100mg/day of root extract versus placebo and daily consumption of 100mg and 150mg/day of root extract versus placebo. Parallel follow-up was for 12 and 16 weeks. The primary outcome was the frequency of migraine attacks.

Two reviewers independently selected the studies for inclusion.

Assessment of study quality
It appears that two reviewers independently assessed study quality. Study quality was assessed by: eligibility criteria specified; randomisation appropriate; treatment allocation concealed; similarity at baseline; outcome measures and control interventions explicitly described; co-interventions comparable; outcome measures relevant; adverse events; drop-outs fully described; sample size based on a priori power calculation; intention-to-treat analysis; point estimates and measures of variability presented for the primary outcome measure; appropriate timing. This gave a maximum quality score of 13 where 10 was the cut-off for high quality.

Data extraction
Two reviewers independently extracted the data. Data was extracted according to a checklist.

Methods of synthesis
A narrative synthesis was provided. Pooling of data from the studies was not considered appropriate due to the heterogeneity in the results. A table was used to summarise methodological quality.

Results of the review
Two studies (n=293) were included, both of which were rated as high quality (with scores of 10 and 11).

One trial (n=60) showed a significant reduction in migraine attacks for 100mg Petadolex compared to placebo. The other trial (n=233) reported a statistically significant effect for the 150mg dose for decreased frequency of migraine attacks but not the 100mg dose.
Authors' conclusions
There is moderate evidence in support of the effectiveness for 3-4 months daily treatment with 150mg Petasites root extract Petadolex in the prophylaxis of migraine.

CRD commentary
The review addressed a clear question and undertook a limited search for publish trials. The search appears to have been restricted to trials within the selected databases searched but no attempt was made to locate unpublished studies, which might have introduced publication bias. Minimal inclusion criteria were applied and the methodological quality of the included studies was assessed and incorporated into the discussion of the results. Both studies were of good quality. Overall, it would be unwise to draw too many conclusions regarding the suitability of the intervention for the prophylaxis of migraine from the two relatively small studies included in the review.

Implications of the review for practice and research
Practice and Research: The authors stated that further rigorous studies are required to confirm the effectiveness and safety in long-term use before treatment with Petasites root extract can be recommended as an alternative option for the prophylaxis of migraine.

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