Low-dose seed and shell powder from rose-hip (Rosa canina) can aleviate symptoms of osteoarthritis and reduce c-reactive protein in patients suffering from osteoarthritis

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Purpose: A meta-analysis has shown that a standardised rose-hip powder, Hyben-Vital® containing seeds and shells from Rosa canina, reduces symptoms of osteoarthritis (OA), when used in the dose of 5 g daily. The same remedy can also reduce markers of inflammation. The aim of the present study was to test if the aforementioned rose-hip powder, when given as a booster of 5 grams daily for 3 weeks, then followed by 2.5 g for the following 9 weeks, would alleviate symptoms of osteoarthritis and reduce C-reactive protein (CRP) in patients suffering from OA of the hip or knee.

Methods: The study (ClinicalTrials.gov Identifier NCT01459939) included 120 patients who were allocated randomly to either active treatment: 5 grams daily for the first 3 weeks followed by 2.5 gram daily for the following 9 weeks, or placebo in a similar dose and of similar colour, taste and smell. All the patients were diagnosed with OA according to the criteria of the American College of Rheumatology. The WOMAC questionnaire was used throughout. The primary effect variables were pain and activity of daily living (ADL). A Secondary effect variable was stiffness. CRP was estimated using normal laboratory routine. The Wilcoxon test was used within groups and the Man-Whitney test when comparing groups. Significance level was a p-value of <0.05. All data given are on the basis of the intention to treat (ITT). To test for a possible dose-dependency the bodyweight of each patient was plotted against the different symptom scores, and a correlation test was made on each of the two groups at the initial level and after 6 and 12 weeks of treatment.

Results: The two groups were comparable at the initial level regarding age, sex, bodyweight, consumption of rescue medication and the severity of OA. Twelve weeks of active treatment resulted in a reduction in WOMAC pain from 17.79 +/- 8.80 to 16.57 +/-9.88, p<0.14, whilst the placebo group showed a decline in pain score from 17.96+/-7.08 to 14.41 +/-7.60, p<0.001. Comparing groups yielded a Man-Whitney p-value of 0.058. No correlation was present between weight and pain score in either of the two groups on the day of inclusion. After both 6 and 12 weeks of active treatment, there was a significant negative correlation between weight and pain score (p<0.021 and p<0.022, respectively). The lower the weight the more pronounced the reduction in pain. No correlation was observed at any time point during placebo. The ADL score declined from 60.59 +/-31.33 to 53.91 +/- 30.59 after 12 weeks of active treatment (p<0.016). Placebo resulted in a decline from 55.71 +/-25.19 to 43.90 (p<0.001). Comparing groups yielded a Man-Whitney p-value of 0.098. There was no correlation between weight and ADL score in either of the two groups on the day of inclusion. Six and 12 weeks of active treatment, however, resulted in a negative correlation between weight and ADL score (p<0.019 and p<0.009 respectively). To summarize, the less the weight of the patient the better the impact from treatment. In the placebo group there was no significant correlation between weight and ADL score at any time point. Similar results for active treatment and placebo were obtained when testing the secondary effect variable. CRP significantly declined as a result of active treatment. Man-Whitney p-value 0.042.

Conclusions: The present data suggest that patients with osteoarthritis of the knee or hip can benefit from treatment with the present rose-hip powder, when given a booster of 5 grams daily for 3 weeks, followed by 2.5 g for the following 9 weeks, with the effect becoming statistically significant in the group of patients of lower weight than 84 kg. This low-dose also significantly reduces CRP.