

Rose hip extract preparation – New research results in humans

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Traditional use

Ordinary rose hips (spurious fruits of *Rosa canina* L.) were used as typical foodstuff to substitute Vitamin C and herewith to prevent or cure common cold diseases. Nowadays a secondary application of rose hips is found, as remedy for anti-inflammatory diseases [1], especially against arthritic pain. Previous in-vitro studies concern with cytokine- or matrix metalloproteinases- inhibition capacities [2]. Also long time intake (>12 weeks) of collagen hydrolysates (10 g/day) were known to help arthritic patients [3]. As investigators found, there could be realized a synergistic effect, using collagen hydrolysate and rose hip extract simultaneously [4,5]. Dose-finding refers to these last mentioned studies, where half of single dosage, respectively half of single dosage equivalent, seems to be effective enough.

Study – hypothesis & design

Starting hypothesis was, that the investigated combination "jointsol" – a purified aqueous rose hip extract together with collagen hydrolysate – is able to reduce arthritic pain and to enable patients to reduce conventional medicine like NSAIDs or opioids, and to do this faster, than the single ingredients could.

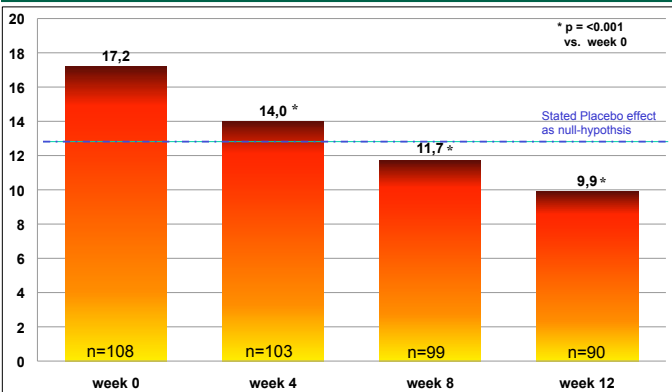
Therefore a 12-week non-interventional uncontrolled observational multicenter human study (n=108) on patients with osteoarthritis (clinically and radiologically verified) was done, with instant rose hip extract preparation jointsol®, which is commercial available in Spanish health food markets. Each jointsol® sachet contains 0.5g of purified aqueous rose hip extract, as well as 5g collagen hydrolysate as active ingredients, additionally with sugar, sweeteners, ascorbic acid and aroma components.



Study population

The study population was characterized by predominantly overweight (Ø 80,2 kg @ Ø 167,9 cm) females (70,4%). They were all above 50 years old (Ø 65,4 years) with uni- or bilateral gonarthrosis. The level of Gonarthrosis acc. Jäger and Wirth [6] was categorized between 1 and 2 (19,3% vs. 80,7%) on knee joints.

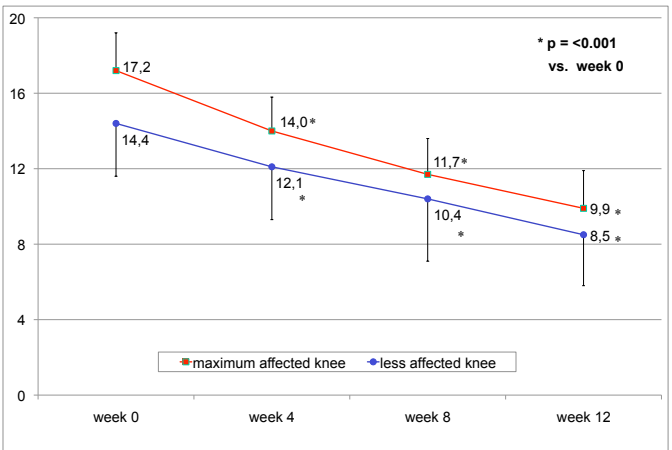
WOMAC pain score I



The study hypothesis for the WOMAC-pain-score in the maximum affected knee was confirmed after 8 weeks. During the whole time of the study, the intake of NSAIDs and other pain medicaments could be reduced by 15.5% of the medicated patients.

WOMAC pain score II

As well as primary parameter „pain“ is positively influenced on maximum affected knee, on the less affected knee WOMAC pain score is reduced parallel:



Secondary Parameters

Following other parameters were also positively influenced:

Parameters	Baseline	Final Visit
1. Radiographic deformations	91,7%	55,1%
1.1 Diminished joint space in maximum affected knee	80,6%	48,3%
1.2 Diminished joint space in less affected knee	30,6%	19,1%
1.3 Osteochondrosis in maximum affected knee	63,0%	29,2%
1.4 Osteochondrosis in less affected knee	25,0%	10,1%
2. Goniometry (normal-null-method)		
2.1 Flexion in maximum affected knee	121,2°	124,2°
2.2 Flexion in less affected knee	127,1°	129,2°
3.1 Morning stiffness in maximum affected knee	73,6%	53,6%
3.2 Morning stiffness in maximum affected knee	34,1%	25,8%
3.3 Impaired Movement in maximum affected knee	57,7%	32,6%
3.4 Impaired Movement in maximum affected knee	25,9%	12,3%

Summary

This first human study on this combination product confirmed our former in-vitro data. The new rose hip preparation shortens time of effect occurrence for human applicants for 4 weeks minimum, in comparison to pure collagen hydrolysate (12-24 weeks) or to rose hip powder (12 weeks). As main result can also be identified that 79.8% felt good or very good at the end of this study (assessment by probands). Further studies will be needed for scientific confirmation, either for pharmaceutical or nutritional claims.

Literature

- [1] The evidence for clinical efficacy of rose hip and seed: a systematic review, *Phytother. Res.* 20, 1–3 (2006) C. Chrubasik et al.
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- [5] Preparations with rosehip extracts and method of producing rosehip extracts, WO2009080778
- [6] *Praxis der Orthopädie*, 2. Aufl. Thieme, Stuttgart, New York, 1992, M. Jäger, C. J. Wirth