Effects of a novel hops extract &undenatured collagen combination in an open case series of subjects with arthritis

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Introduction

• According to the National Health Interview Survey, 30% of US adults have reported experiencing some type of joint pain during the preceding 30 days.2
• The most common types of arthritis in which the main feature is joint pain are osteoarthritis (OA) and rheumatoid arthritis (RA).3
• Common underlying causes such as synovial inflammation, immune-cell infiltration, and chondrocyte pathophysiologic changes have contributed to the pathogenesis of both conditions.4 5
• Hops-derived tetrahydro iso-alpha acids (THIAA) – a mixture of α-, β-, and ad-congeners – have been shown to exhibit anti-inflammatory properties in vitro and to reduce bone cartilage degradation in a mouse model of RA.6 7 8 9 10 11
• The α-congener has demonstrated higher anti-inflammatory activities in vivo than the other two congeners.12 A THIAA mixture with a higher content of the α-congener is termed α-enriched THIAA (αTHIAA).
• Undenatured type-II collagen (UC-II), derived from chicken cartilage, has been shown to ameliorate symptoms in individuals with RA, OA and in normal participants who had joint discomfort after exercise.13 15

Objective

To evaluate the efficacy and safety of nTHIAA and UC-II combination in patients with chronic joint pain, probably secondary to OA and/or RA.

Methods

• Patients
  N=17; 12 women and 5 men (39 – 69 y/o), 13 with probable OA and 4 with possible RA
• Study design
  Open case series
• Treatment
  2 tablets twice daily; each tablet contains nTHIAA (150 mg) + UC-II (10 mg)
• Follow-ups
  Baseline to 12 weeks
• Assessments
  At each clinic visit, patients were assessed by the following:
  VAS-P: Visual Analog Scale for Pain
  MSQ: Medical Symptoms Questionnaire, including joint/muscle score and total score
  MOS-SF36: Health and Wellness Outcome Inventory, including physical component and mental component
  AIQ: Arthritis Impact Questionnaire, including arthritis symptoms score and daily living score
  HAQ-DI: Health Assessment Questionnaire; Q5 indicates overall pain over previous week
  AIMS2: Arthritis Impact Measurement Scales 2
  VAS-E: Visual Analog Scale for Efficacy
  Analgesic use by patients

• Statistical analysis
  Two-sided paired t-tests comparing with baseline; data expressed as mean ± standard error

Results

Overall: All subjects completed the 12-week evaluation and all reported improvements; some improvements were seen as early as 2 weeks.

VAS-E: At Week 12, participants rated product efficacy at 7.8 ± 0.47 out of 10.

Analgesics use:
At baseline, 13 of the 17 participants were using analgesics for joint pain. At Week 12, only 4 were using analgesics, 2 of the 4 had reduced dosages.

Safety and tolerability:
The product was well tolerated and no serious side effects.

Study limitations:
• lack of a randomized control arm to compare efficacy
• potential placebo effect and seasonal effect
• selection bias
• small sample size and short study duration.

Illustrative case report

• The case is a 39 y/o white male with a 5-year history of chronic joint pain (diagnosed with OA in 2008), who uses acetaminophen for pain relief.
• Began taking nTHIAA (600 mg/d) and UC-II (40 mg/d) in 2013 with no changes to diet or exercise.
• Patient noted continued improvement and pain relief during the next 6 months.
• Patient has stopped taking analgesics as a result.

Conclusion

This case series provides preliminary evidence that nTHIAA and UC-II combination is safe and efficacious in management of participants with chronic joint pain and that improvement in most participants was experienced within 2 weeks.

References

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