Case #1506: A Case Study Evaluating the Effects of an Anti-Inflammatory Medical Food Program and Nutritional Supplement Containing THIAA, Rosemary Extract, and Oleanolic Acid in a Patient with Osteoarthritis and Autoimmune Disease

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PURPOSE

The purpose of this case study was to assess the effectiveness of an anti-inflammatory medical food—along with a complementary elimination diet—in a patient with osteoarthritis (OA) and autoimmune disease (AI).

PATIENT'S PRESENTATION AND HISTORY

A 50-year-old Caucasian female presented with symptomatic OA of the right knee, causing current disability. The patient was in a car accident 5 years earlier and injured her knee, developing OA, and had progressive difficulty ever since. She underwent surgery 14 months prior to presentation with a meniscal tear repair and experienced progressive pain afterwards. Physical therapy sessions had reduced her pain from severe to moderate. Viscosupplementation by injections to increase cushioning and lubrication of synovial fluids 5 months prior had not been helpful in reducing pain. The patient re-injured her knee 5 months before presentation by falling and twisting the right knee. She also occasionally had difficulty with her elbows.

Other current complaints included hypertension (HT) for the prior 2 years; irritable bowel symptoms, particularly since total abdominal hysterectomy 1 year prior; chronic fatigue and immunodeficiency syndrome with chronic Epstein Barr virus and fibromyalgia. She had a distant history of colitis, treated with elimination of wheat from the diet. Her medical history also included a horseback riding accident at age 17 with a significant quadriceps injury (muscle torn but not repaired). Her family history included coronary artery disease and possible uterine carcinoma.

Patient's Objective/Subjective Information

- HT: 65.5"; WT: 266 lb; BP: 170/104
- Subjective symptoms: Compromised physical functioning and presence of pain as indicated by clinical questionnaires.
- Lifestyle: The patient followed the blood type diet (type O), with avoidance of wheat and corn. No caffeinated beverages but some red wine.
- Allergies/intolerances: Amitriptyline (antidepressant) and viscosupplementation injections; food sensitivities: wheat and corn.
- Prescriptive medications: Progesterone cream, unknown dose, twice daily.
- Non-prescriptive medications/supplements: Fruit and vegetable juice-derived supplements, 2 capsules each daily; coral calcium, 1500 mg daily; probiotic (*Bifidobacterium bifidum, Lactobacillus plantarum, Lactobacillus reuteri*) 5 million cfu, 3 capsules daily; sublingual vitamin B_{12}, 1000 mcg daily; EPA 600 mg/DHA 400 mg daily.

ASSESSMENT AND PLAN

Initial assessment indicated OA of the right knee (confirmed by physical exam) and HT.

The patient was instructed to:

- Begin nutritional supplement containing tetrahydro-iso-alpha acids (THIAA), rosemary extract, and oleanolic acid from hops (*Humulus lupulus L.*), 1 tablet twice daily
- Follow-up with primary physician for HT.

RESULTS

1 and 2 Weeks After Starting Program

After only 6 days, the patient experienced a significant reduction of OA symptoms, as indicated by her MSQ score. After 2 weeks, the patient reported continued improvement in knee pain and function. Additionally, she had not being bothered by her sciatica. She had not had a follow-up in her HT, and it had worsened, plus she noted pounding in her ears. Laboratory test results were significant for elevated hs-CRP at 10.1 mg/L, elevated erythrocyte sedimentation rate (ESR) at 78 mm/hr, and positive ANA (1:640) with a homogenous and speckled pattern, all indicating presence of an autoimmune condition.

The patient was instructed to:

- Begin arginine supplement, 2 tablets twice daily.
- Increase THIAA/rosemary/oleanolic acid supplement to 1 tablet 3 times daily.

5 Weeks After Starting Program

The patient reported a remarkable improvement of arthritic knee symptoms. Additional stool tests revealed gluten and casein sensitivity.

The patient was instructed to:

- Begin anti-inflammatory medical food, gradually working up to 2 scoops twice daily.
- Begin concentrated probiotic (*Lactobacillus acidophilus, Bifidobacterium lactis*), 1 capsule daily.
- Start a gluten-free elimination diet.

15 Weeks After Starting Program

The patient was very pleased with her improvement, reporting that she could "totally bend her knee" and was able to exercise longer. Her HT had also improved.

25 and 28 Weeks After Starting Program

The patient noted that her joints felt "awesome," and BP readings at home had been consistently around 130/85. She was also very pleased with normalization of her bowel movements, since she had a history of alternating constipation/diarrhea. The patient was placed on a food elimination program—including the anti-inflammatory medical food—followed by food reintroduction. Afterwards, she reported a higher energy level and a much improved general quality of life. Laboratory tests performed 28 weeks after starting the program revealed decreased hs-CRP (6.1 mg/L) and ESR (51 mm/hr), indicating an improvement of her AI.

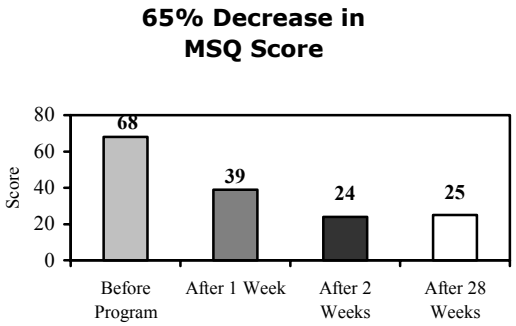

Figure 1. After only 2 weeks, the patient's MSQ† score decreased, suggesting a substantial improvement in general well-being, and was sustained at 28 weeks.

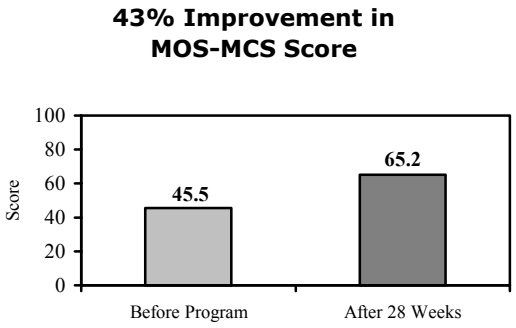

Figure 2. The patient's score on the mental component summary portion of the Medical Outcomes Survey (MOS)* increased from 45.5 to 65.2 (reference range: 50 or above = healthy function). This result suggests an improvement in the patient's mental functioning.

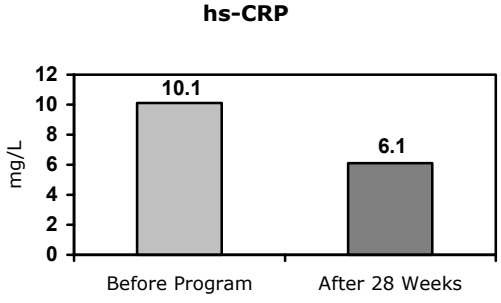

Figure 3. After 28 weeks, the patient's hs-CRP level was reduced from 10.1 to 6.1 (high risk range >3.0 mg/L). This result suggests a reduction in risk for issues related to cardiovascular disease.

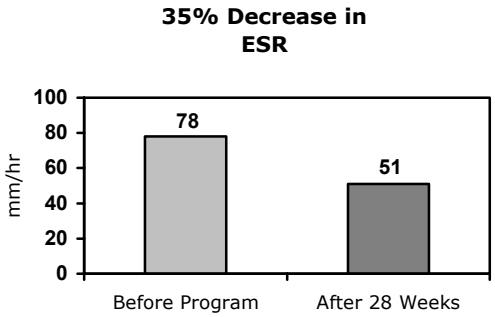

Figure 4. The patient's ESR rate decreased from 78 to 51 (reference range for patient 0-30 mm/hr) in 28 weeks, suggesting a reduction in inflammation.

SUMMARY

This case study suggests that a targeted nutritional support program that incorporates an anti-inflammatory medical food and nutritional supplement containing THIAA, rosemary extract, and oleanolic acid—along with an elimination diet—can improve symptoms of OA and AI. Markers of cardiovascular health and inflammation, as well as gastrointestinal function, were also improved with this protocol.

NOTE

The information provided in this case study describes the results of one patient under the care of a licensed healthcare practitioner and may not be a typical response. The medical food discussed in this study is to be used under the supervision of a physician or other licensed healthcare practitioner.

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†The Medical Symptoms Questionnaire (MSQ) is a clinical tool for the evaluation of general physical symptoms. Total scores above 75 are generally associated with substantial symptomatology and disability; scores below 30 generally indicate few or low-intensity symptoms.

* The Medical Outcomes Survey SF-36 is a well-validated general quality-of-life questionnaire that summarizes health outcome in two reliable reproducible scores: the Physical Component Summary (PCS) and the Mental Component Summary (MCS). Scores above 50 are generally associated with healthier individuals, whereas scores lower than 50 indicate compromised functioning.

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