

Case # 1270: A Case Study Evaluating the Effects of an Inflammatory-Modulating Medical Food, RIAA, Vitamin D₃, Selenium, and Zinc in a Patient with Rheumatoid Arthritis and Hypertension

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PURPOSE

This case study was designed to assess the effectiveness of an anti-inflammatory medical food featuring a proprietary blend of reduced iso-alpha acids (RIAA) and vitamin D₃, along with a complementary diet, in a patient with RA.

PATIENT'S PRESENTATION AND HISTORY

A 51-year-old Caucasian female presented in July 2005 with a chief complaint of arthritic pain of 3 years duration. She currently suffered from moderate leg cramps; foot cramps; joint pain, deformity, redness, and stiffness; and muscle aches, pains, weakness, and mild spasms—all of which responded partially to ibuprofen and some supplements. The patient reported that symptoms began at the end of 2001 when she was stressed about her job and developed a URI and plugged ears. Following 2 months of symptoms, she developed discomfort in her finger joints and feeling like her hand was bruised. By March of 2002, she started experiencing pain and discomfort in her feet, and symptoms progressed to her arms, neck, chest, knees, and shoulders. RA was diagnosed in June of 2003, and she was placed on a blood-type diet and supplements. She noted about a 50% improvement with this protocol, but eventually she discontinued it and her health worsened again.

Her current medical conditions also included belching, which started about the same time as her pain and has continued since; high blood pressure that had slowly been creeping up; depression related to being out-of-shape and having lost interest and ability to exercise; severe cold intolerance; daytime sleepiness and fatigue; fearfulness and irritability; severe bad teeth; mild canker sores; strong stool odor and undigested food in stools; severe cellulite; mild hair dryness; mild dark circles under eyes; easy bruising; eczema; mild swollen ankles; and varicose veins.

The patient's past medical conditions included anemia and she had a family history of diabetes, hypertension (also in siblings), and stomach disorders on maternal side.

Patient's Objective Information

- Ht: 66.5"; Wt: 163 lb; BP: 151/95
- Laboratory tests revealed depressed RBC, hemoglobin, and hematocrit; elevated platelets; elevated hs-CRP at 46.9 mg/L; elevated rheumatoid factor at 60 IU/mL; elevated sedimentation rate at 65 mm/hr; and negative for antinuclear antibodies

- Physical examination: Essentially unremarkable except for mild edema in extremities
- Non-prescription medications and supplements: Ibuprofen (800 mg every 8 hours), OTC sleep aid containing diphenhydramine HCl (as needed for sleeping), vitamin C with magnesium (1,000 mg daily), calcium citrate (1,000 mg daily), multivitamin with no iron or copper (4 tablets daily), grape seed extract (150 mg daily), SAM-e (200 mg twice daily), joint supplement (2 caps twice daily)

PLAN AND RESULTS

Assessment: RA with elevated inflammatory markers, hypertension, and anemia.

Plan: The patient was instructed to begin an inflammatory-modulating medical food in powdered beverage form, including reduced iso-alpha acids from hops (RIAA) and vitamin D₃, working up to 2 scoops twice daily. She was also placed on an elimination diet to start 2 weeks later.

4 and 7 Week Results

At the 4-week visit, the patient reported that she was doing much better. She was not as tired as before, and she had less pain with no further back flare-ups. She had been compliant on the elimination diet and had lost 3 lb. Stool analysis from 2 weeks earlier indicated slight dysbiosis. The patient was asked to continue the prescribed medical food and to begin the following:

- Nutritional supplement containing 200 mg RIAA, 1 tablet twice daily
- Nutritional supplement containing 2,000 IU vitamin D₃ with soy isoflavones, 1 tablet daily
- Supplement containing a combination of EPA (300 mg) and DHA (400 mg) essential fatty acids and vitamin E (10 IU), 2 softgels twice daily

After 7 weeks, the patient reported her discovery of intolerance to wheat (as a result of the food re-introduction protocol), which produced fatigue and exacerbation of the pain in her hands. She was instructed to discontinue the RIAA and vitamin D₃ supplement and replace with a supplement containing a combination of RIAA, vitamin D₃, zinc, and selenium, 1 tablet twice daily along with the medical food.

9 Week Results

After 9 weeks, the patient's pain symptom improvement had sustained and she continued to challenge foods. She felt quite energetic and was very happy with her progress. Additionally, her blood pressure had normalized to 120/84 from initial 151/95. She was instructed to:

- Continue the food re-introduction and the prescribed doses of medical food, RIAA/D₃/zinc/selenium supplement, and EPA/DHA supplement
- Add (to improve her gut microbiological balance) 2 probiotic supplements—one featuring a blend of *Bifidobacterium lactis* strains (targeting the large intestine) and the other featuring a blend of *Lactobacillus* strains (targeting the small intestine)—1 capsule twice daily each (upon rising and at dinner)
- Add a nutritional supplement containing a combination of vitamin B₁₂, folic acid, and intrinsic factor, 1 tablet in the morning

Figure 1. After 7 weeks, the patient's Medical Outcomes Survey* PCS and MCS scores increased, suggesting a reduction in pain and improvement in mental functioning.

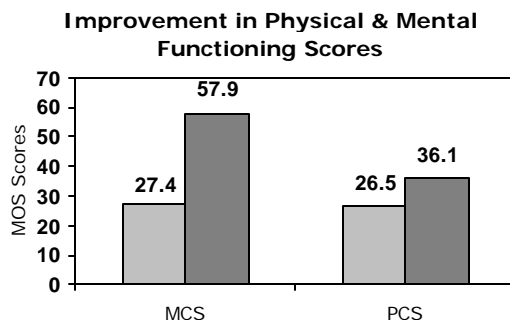
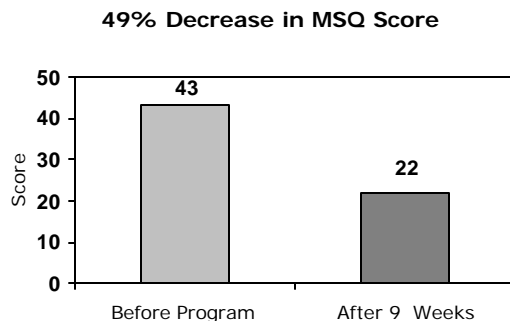


Figure 2. The patient's MSQ[§] score decreased from 43 to 22 in 9 weeks. This result suggests substantial improvement in general physical symptoms.



50% Lower Score on Rheumatic Symptoms Questionnaire

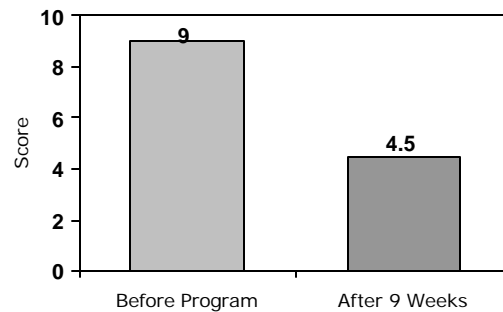


Figure 3. After 9 weeks, the patient's score on the AIMS2-A[†] questionnaire for the symptoms component decreased from 9 to 4.5 (reference range: 1-10). This result indicates a noteworthy improvement in rheumatic symptoms.

SUMMARY

This case study suggests that a protocol combining an inflammatory-modulating medical food featuring the addition of RIAA and vitamin D₃, along with a prescribed dietary plan, may be beneficial as nutritional support for patients with immune-inflammatory conditions such as RA.

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.

Financial support for this study was provided by Metagenics, Inc. This study was conducted in collaboration with the Functional Medicine Research CenterSM (FMRC), the clinical research arm of Metagenics, Inc.

*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 of 50 or higher are associated with healthier individuals, whereas scores lower than 50 indicate compromised functioning.

§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 AIMS2-Abridged questionnaire is a clinical tool for the evaluation of health status and outcomes of individuals with rheumatic diseases. A low score value indicates a high health status; while a high score value indicates poor health.

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